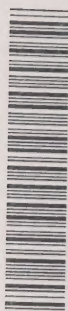


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Ontario

ROYAL COMMISSION OF INQUIRY INTO CERTAIN  
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND  
RELATED MATTERS.

Hearing held  
8th floor  
180 Dundas Street West  
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

P.S.A. Lamek, Q.C.

E.A. Cronk

Thomas Millar

Commissioner

Counsel

Associate Counsel

Administrator

Transcript of evidence  
for

December 13, 1983

VOLUME 80

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ROYAL COMMISSION OF INQUIRY INTO CERTAIN  
DEATHS AT THE HOSPITAL FOR SICK CHILDREN  
AND RELATED MATTERS.

Hearing held on the 8th Floor,  
180 Dundas Street West, Toronto,  
Ontario, on Tuesday, the 13th  
day of December, 1983.

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner  
THOMAS MILLAR - Administrator  
MURRAY R. ELLIOT - Registrar

APPEARANCES:

P.S.A. LAMEK, Q.C.	Commission Counsel
D. HUNT ) L. CECCHETTO)	Counsel for the Attorney General and Solicitor General of Ontario (Crown Attorneys and Coroner's Office)
I.J. ROLAND) M. THOMSON ) R. BATTY )	Counsel for The Hospital for Sick Children
D. YOUNG	Counsel for The Metropolitan Toronto Police
W.N. ORTVED) K. CHOWN )	Counsel for numerous Doctors at The Hospital for Sick Children
M. O'CONNOR	Counsel for the Registered Nurses' Association of Ontario and 35 Registered Nurses at The Hospital for Sick Children

(Cont'd)









APPEARANCES: (Continued)

D. BROWN	Counsel for Susan Nelles - Nurse
E. FORSTER	Counsel for Phyllis Trayner - Nurse
J.A. OLAH	Counsel for Janet Brownless - R.N.A.
B. JACKMAN	Counsel for Mrs. M. Christie - R.N.A.
S. LABOW	Counsel for Mr. & Mrs. Gosselin, Mr. & Mrs. Gionas, Mr. & Mrs. Inwood, Mr. & Mrs. Turner, Mr. & Mrs. Lutes, and Mr. & Mrs. Murphy (parents of deceased children)
F.J. SHANAHAN	Counsel for Mr. & Mrs. Dominic Lombardo (parents of deceased child Stephanie Lombardo); and Heather Dawson (mother of deceased child Amber Dawson)
W.W. TOBIAS	Counsel for Mr. & Mrs. Hines (parents of deceased child Jordan Hines)
J. SHINEHOFT	Counsel for Lorie Pacsai and Kevin Garnet (parents of deceased child Kevin Pacsai)





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---Upon commencing at 10:00 a.m.

DR. ALOIS RUDOLF HASTREITER, Resumed

THE COMMISSIONER: Yes, Mr. Ortved?

MR. LAMEK: Before we do that,  
Mr. Commissioner, may I just have Dr. Hastreiter  
identify a couple of documents so that we may mark  
them.

Dr. Hastreiter, you have referred in  
your evidence so far to a number of cases of fatal  
digitalis intoxication. We have now had the case  
reports from which that information was drawn marked  
in evidence, but I understand that over the past few  
days you have put together in tabular form the  
various cases of fatal intoxication so they are all  
in one place and we can see them readily.

Is that a copy of the material that  
you have put together?

THE WITNESS: That is correct.  
This includes the babies in the age group we are  
dealing with.

MR. LAMEK: Fine, thank you.  
Might that be the next exhibit, Mr. Commissioner,  
please?

THE COMMISSIONER: Exhibit 285.  
What would you describe it as, a summary?







1  
2  
3 MR. LAMEK: Shall I call it, Doctor,  
4 a compilation of the information available on case  
5 reports of infants dying of digoxin intoxication,  
6 for want of a longer term?

7  
8 THE COMMISSIONER: Yes, all right.

9  
10 ---EXHIBIT NO. 285: Document entitled "Acute Fatal  
11 Digitalis Toxicity", being  
12 information available on case  
13 reports of infants dying of  
14 digoxin intoxication.

15  
16 MR. LAMEK: Next, Doctor, you have  
17 prepared a short one and a bit page summary of a  
18 case report of a six-week old baby girl with Down's  
19 Syndrome who also received a very substantial over-  
20 dose of digoxin and unhappily died as a result of  
21 that. Is that the copy of the case report you  
22 prepared?

23 THE WITNESS: That is true. This  
24 is another case that occurred in Chicago.

25 MR. LAMEK: Thank you. May that  
be the next exhibit, please? It is merely headed  
"Case Report, A Six-Week Old Black Girl".

THE COMMISSIONER: That will be  
Exhibit 286.

---EXHIBIT NO. 286: Document entitled "Case Report".





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MR. LAMEK: Then, Doctor, you have provided to me an update of the presentations, publications and abstract listings from your curriculum vitae. Have I correctly identified that document?

THE WITNESS: Yes.

MR. LAMEK: I wonder if we could call that, Mr. Commissioner, an A suffix to the original curriculum vitae. I am afraid I do not recall the number of that. Exhibit 280, I think, Mr. Elliot tells me.

THE COMMISSIONER: Then this will be Exhibit 280A.

MR. LAMEK: 280A, thank you.

---EXHIBIT NO. 280A: Update of presentations, publications and abstract listings from Dr. Hastreiter's Curriculum Vitae.

MR. LAMEK: You have then prepared, Doctor, a manuscript listing called Digoxin Ranges, listing, as I understand it, the ranges of digoxin concentrations found in cases of acute administration and chronic administration of digoxin, both in terms of full term neonates and, what is the other one, premature neonates?







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THE WITNESS: Yes, premature neonates, full term neonates and then children under two years and above two years of age.

The reason I did this is because I had been specifically asked about the ranges in myocardium of the digoxin concentration, and this is sort of an extension of that one paper that has been incorporated as an exhibit here, of the tissue concentration, and we had written another paper which should have been published but I could not find it yet, and this is a summary of that.

MR. LAMEK: Well, you have shown concentration ranges under five columns, four of them I think I can interpret. From the left, the left ventricle, then right ventricle, the extreme right is lung, the next to the right is liver, but the middle one?

THE WITNESS: Skeletal muscles.

MR. LAMEK: Skeletal muscles, thank you.

THE WITNESS: Yes.

MR. LAMEK: Thank you. May that be the next exhibit, Mr. Commissioner.

THE COMMISSIONER: Exhibit 287.







1  
2  
3 ---EXHIBIT NO. 287: Document entitled "Digoxin  
Ranges".

4 MR. LAMEK: Next, Dr. Hastreiter,  
5 you have provided us with copies of a paper, which  
6 I understand is to be published in the very near  
7 future. It is called "Tissue Concentrations at  
8 Autopsy in Infants and Children Receiving Therapeutic  
9 Digoxin". Is that the paper which is to be published  
10 shortly?

11 THE WITNESS: That is correct.  
12 The paper should have appeared or is appearing at  
13 any moment. I have not seen it yet, but actually,  
14 the table that I had that you just gave me prior to  
this is a summary of the contents of this paper.

15 MR. LAMEK: All right. Just one  
16 point of clarification, Doctor. The first page after  
17 the title page is headed No. 2, but I take it that is  
the first page of the text?

18 THE WITNESS: Yes, it is.

19 MR. LAMEK: Thank you.

20 THE COMMISSIONER: 288.

21 ---EXHIBIT NO. 288: Document entitled "Tissue  
22 Concentrations at Autopsy  
23 in Infants and Children  
24 Receiving Therapeutic Digoxin".  
25





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MR. LAMEK: Thank you, sir.

3

MR. TOBIAS: Is that 288, Mr. Lamek?

4

MR. LAMEK: Yes.

5

MR. TOBIAS: Thank you.

6

MR. LAMEK: Finally, Dr. Hastreiter,

7

you have provided us with copies of a paper by

8

A.C. Moffat, a paper called "Interpretation of Post

9

Mortem Serum Levels of Cardiac Glycosides After

10

Suspected Overdosage" published in 1974 in Acta

11

pharmacol. et toxicol. Have I correctly described  
that?

12

THE WITNESS: Right. This is the

13

only other case that is missing from my table here.

14

In order to complete the information of the cases of

15

babies who died of digoxin overdose I submitted this  
paper.

16

MR. LAMEK: Thank you, sir.

17

THE COMMISSIONER: Exhibit 289.

18

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---EXHIBIT NO. 289: Document entitled "Interpreta-  
tion of Post Mortem Serum  
Levels of Cardiac Glycosides  
After Suspected Overdosage".

20

21

MR. LAMEK: Thank you, Doctor.

22

THE WITNESS: You are welcome.

23

Perhaps I should point out that we are concerned

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25







1  
2  
3 with Case 6 of this publication here.

4 THE COMMISSIONER: Yes, Mr. Ortved?

5 MR. ORTVED: Thank you,  
6 Mr. Commissioner.

7 CROSS-EXAMINATION BY MR. ORTVED:

8 Q. Dr. Hastreiter, my name is  
9 Neils Ortved and I appear here for a number of the  
10 doctors at the Hospital for Sick Children, and included  
11 in them, the clinicians about whom you have heard.

12 I want to deal not at as great a  
13 length as did Mr. Scott, but with your exercise in  
14 analyzing these 36 babies, Dr. Hastreiter, and assign-  
15 ing them to a category of either small, fair or good.  
16 If I can step back a moment and appreciate the  
17 perspective from which you approached this exercise,  
18 as I understand it, you are of the view that infants  
19 with congenital heart disease can, in certain  
20 circumstances, sometimes die suddenly, correct?

21 A. Definitely.

22 Q. But it is also your view that  
23 most, prior to death, will demonstrate at least a  
24 perceptable deterioration?

25 A. Right.

Q. With that in mind, you looked  
at these charts, and for all intents and purposes,





1  
2  
3 the infants to which you assign the good category  
4 are those where you perceived death without deteriora-  
5 tion?

6 A. Yes, to a varying degree.

7 Q. Right. Now, just in terms of  
8 that exercise, can I ask you firstly some questions  
9 about cardiac patients generally.

10 Firstly, I take it that when we are talk-  
11 ing about infants with congenital heart disease, it  
12 is not an exaggeration to say that they do not all  
13 adhere to the rules, so to speak; would that be fair?

14 A. Yes.

15 Q. We are talking here about  
16 a group of patients who, by virtue of their disease,  
17 by virtue of their age, by virtue sometimes of the  
18 fact that they have had surgery, major surgery at  
19 a very, very early age and also just by virtue of  
20 their nature, being so young, are in many respects  
21 unpredictable; would that be fair?

22 A. Yes.

23 Q. And I take it that you, yourself,  
24 in your long career as a pediatric cardiologist have  
25 had cases where the children, so to speak, do not  
26 adhere exactly to the rule?

27 A. That is correct.







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Q. And that is something that you, having regard to your experience, anticipate encountering from time to time?

A. Yes.

Q. And I take it that having regard to what is your day to day practice there are cases which really are difficult to explain from time to time.

A. Yes.

Q. And secondly I think it is important that we emphasize here that these patients, and you have conceded this very fairly, although the heart lesions are really what brings them to the cardiac ward, in many cases their illness is not restricted to congenital heart disease, correct?

A. That's true.

Q. And you can get sudden death in infants from diseases other than congenital heart disease, correct?

A. Yes, from certain conditions.

Q. Sure. I mean, you are more expert than I am obviously but one that comes to my mind, for instance, is respiratory illness can result in a fairly abrupt deterioration and death, correct?





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A. Yes, occasionally.

3

Q. And lastly, in terms of just

4

a background to this exercise you performed, you

5

won't have any trouble acknowledging with me

6

that medicine is a very inexact science.

7

A. That is correct.

8

THE COMMISSIONER: Inexact is enough,

9

is it not? Did you have to put the very on? It is

10

not an exact science, but I wouldn't say it was

very inexact, would you?

11

THE WITNESS: Well, maybe very is

12

exaggerated.

13

THE COMMISSIONER: You were led into

14

that.

15

THE WITNESS: It is an inexact

16

science at this point. It is a mixture of science and

art.

17

MR. ORTVED: Q. The areas of black

18

and white are in the minority.

19

A. Well, I won't go this far.

20

I think that many of the facts, of course, are known

21

at least to some degree and I would say the majority

22

of situations are pretty standard and I would say

23

you could call it black and white if you like, but

24

there is a gray zone that applies to, especially to

25







1

2

individual cases because they are not pure, they are usually a mixture of a number of factors.

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Q. Right. I guess all I am saying about medicine is that it is a science in which you quite legitimately anticipate differences of opinion.

7

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A. In many instances.  
Q. Sure. For instance, an area in which you might get a difference of opinion is in an area as regards whether or not there has been a presence or an absence of deterioration in a patient.

14

15

16

A. Oh, yes, that has a lot to do with the observer and the experience of the observer and so forth.

17

18

Q. Precisely. My simple point is that that type of an opinion, for instance, is a subjective one.

19

20

21

A. To some degree.

22

23

24

25

Q. As you have put it, it depends on the observer, right?

A. There are many objective findings, but in addition there is a subjective factor involved.

Q. Now, just in terms of this exercise that you carried out, I would just like to look at a couple of factors that would have distinguished





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you from the clinicians back at the time that these babies died. For instance, you have told us that what you did was looked at these 36 children's - I know that you looked at more, but we are speaking of 36 now - you examined them and I think you put it with the highest index of suspicion with a view to really eliminating those but only those about whom you could feel confident that there was no possibility of digoxin overdose.

A. That's true.

Q. So, what characterized your analysis of these 36 cases was your index of suspicion for homicide, really.

A. Yes, I think you could say that.

Q. And that, I guess you wouldn't have any trouble conceding with me, is a very different exercise than would have been engaged in by the clinicians on the ward back at the time that these various children were dying.

A. Yes, it is different.

Q. And as I also understand your exercise, you were looking to only exclude those about whom you could feel confident, there was no possibility of digoxin overdose and to the extent that you erred, you erred on the side of raising the level







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rather than lowering it, putting them in a higher category as opposed to a lower, would that be fair?

3

4

A. Yes, I think that is correct.

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Q. And if there are any doubts about any of those children, you resolved those in favour of putting them into a higher category, the case required a greater level of scrutiny.

8

9

A. That's right.

10

11

Q. And then secondly you have told us that in performing this exercise you expressly endeavored to exclude from your consideration the results of the toxicology.

12

13

14

A. Yes. When I wrote my initial reports the toxicology was not taken into consideration.

15

16

17

Q. Right. And when you refer to your original reports are those the two page summaries that are found in Exhibit 264?

18

19

20

A. Yes. There are two types of reports; there is an earlier version and then there is a late version, I am referring to all of these.

21

22

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Q. Yes, that is what I meant. As I understand it, when you performed all of your analyses of these children, as I understand it, you attempted to rate them or assess them on clinical





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grounds excluding the toxicology results.

3

A. That is correct.

4

Q. But I think as you have also

5

very fairly conceded, it wasn't always possible to do  
so, correct?

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A. I'm not sure I understand the

7

question.

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Q. Well, just take Baby Cook

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for an example, you remember talking about Baby Cook,  
right?

10

A. Yes.

11

Q. And Baby Cook was a child

12

with pulmonary stenosis, correct?

13

A. A very complex type of heart

14

disease, yes.

15

Q. Right. A very severe lesion?

16

A. Oh, yes.

17

Q. And one of those lesions which

18

you have told the Commissioner might predispose the  
child to sudden death.

19

A. Yes.

20

Q. Clinically you have told us

21

that you weren't really surprised by this child's  
death.

22

23

A. Right.

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Q. But you will, I take it, agree

3

that the toxicology in Baby Cook's death very

4

definitely points to digoxin overdose as being

5

involved in this child's death, correct?

6

A. Yes.

7

Q. And I am suggesting to you that

8

maybe even unconsciously that factor may have

9

influenced you in assigning Baby Cook a fair category

10

as opposed to a small.

11

A. No, I wouldn't say this because

12

the small category were the ones where I could very

13

definitely exclude them from further investigation

14

and this did not occur for Baby Cook. If you look at

15

my grading here I rated him as a number 8, which is

16

a very severe type of heart problem.

17

Q. Now, do you have Volume 75

18

before you there, Dr. Hastreiter? Is that one of the

19

volumes that you have? It is the very small volume

20

of your evidence on Monday, last Monday.

21

A. No, I don't.

22

Q. Well, maybe you could just

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follow along with me here. On Page 6589 of Volume

24

75 you are asked about Baby Cook.

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"Q. Is there anything else that serves as a basis for your opinions about Justin 'Cook'?"

And you answered:

"A. Well, perhaps I should explain that on the clinical grounds Justin Cook's death would be an expected death because the child had a very severe type of heart problem and had what appeared to be a cyanotic episode the day before his death, and I would not at all have been surprised that he would have died from his original condition, but it is the toxicological data later that pointed to it that digoxin is the cause of death."

Correct?

A. Yes.

Q. Now, all I am suggesting to you is that in performing this analysis that you did, being human, the toxicology may have influenced you however minimally, insofar as Baby Cook was concerned.

A. Maybe I should explain what the grading means again. The "small"





1  
2 category really means small probability, it means  
3 the cases that I have no doubts could be excluded  
4 from further investigation, and these usually included  
5 children who either died in surgery, or died of a  
6 totally obvious cause, I mean it had to be really  
7 completely obvious in order for the child to fit that  
8 category.

9 Although I would say that the level of  
10 suspicion for Cook would have been very small, very  
11 small, he still could not be totally eliminated, this  
12 is why I would still place him in the "fair"  
13 category.

14 Q. And insofar as Baby Estrella is  
15 concerned, I guess your answer would be the same.

16 A. Yes.

17 Q. But I take it that the fact that  
18 you were brought into this case and asked to perform  
19 the analysis in the context of the investigation of  
20 prosecution for murder charges, would you concede  
21 with me, had to have some bearing on your function?

22 A. Yes, I would not deny that  
23 totally, I am sure it had certainly an emotional  
24 factor probably.

25 Q. And I am referring now to  
Volume 77, and you were asked here by Mr. Lamek, at







1

2

Page No. 6944:

3

"O. Of course, I am not suggesting

4

for a moment, Dr. Hastreiter, let me

5

be plain. I am not suggesting for a

6

moment that your conclusions about

7

the death of Gary Murphy are wrong,

8

I don't suggest that. But in light of

9

the Gary Murphy case, do we all, and

10

with respect, I include you, do we all

11

not need to regard the expressions of

12

suspicion about many of the babies

13

whose deaths we have been discussing

14

in the last couple of days as perhaps

15

unconsciously influenced to some

16

degree by the then-prevailing climate

17

and the viewpoint from which you were

And your answer was:

18

asked to approach those cases?"

19

"A. I believe so. I would perhaps

20

though emphasize that there were cases

Right?

21

in which toxicology was available."

22

A. That is correct.

23

Q. And you remain of the same view

24

today?

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A. Yes.

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Q. Now, as you have been at pains to emphasize here, the fact that you assigned a child a "good" category isn't to say that that child received an overdose of digoxin.

A. No.

Q. And in fact in the great majority of those children placed in the "good" category their death was in fact consistent with their clinical condition; the timing you may have problems with, but the facts of the death.

A. I think -- again, as I said many times, we are dealing with probabilities, and I think the rating that I gave these children more or less in my opinion expresses the probability that they would have died of natural causes.

For instance, if a child has a rating of "2", then his probability of doing so would be only 20%; if a child has a rating of "8", it would probably be 80%, more or less, plus as you said it is not a very -- totally scientific profession.

Q. I want you to understand me, I am speaking now about your categories of "small", "fair" and "good."

A. Okay.





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Q. I am suggesting to you that the children in the "good" category were still in the great majority of cases children in whom the death was consistent with their clinical condition.

A. Yes. Deaths could have been consistent with the clinical condition, but the mode of death, the manner of death was of course somewhat, I thought, somewhat unusual with respect to the unexpectedness at that particular time and the abruptness and perhaps the failure of being able to resuscitate the child when this episode occurred.

Q. As I understand your evidence over the past few days, it has come through to me that your main difficulty with those children to whom you assigned the "good" category was the timing of the death more than anything else, the unexpected nature having regard to their clinical status.

A. Yes, but the mode of death was important, too, the abruptness I think I emphasized also.

Q. The two of them together?

A. Yes.

Q. I don't want to minimize the difficulty of the exercise you were engaged in, because I take it you will concede that it was a







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very difficult project, correct?

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A. It was.

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Q. And that having regard to the fact that these children were very young, the lesions in most cases very severe, sometimes there being other disease processes at work, the variety of notes that you had to take into account and also the gray areas between your categories of "small", "fair", and "good", correct?

10

11

A. Yes, and also the multiplicity of factors that we had to deal with in every case.

12

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Q. And would I be fair in saying that the rating that you assigned to these children was really a reflection of your visceral reaction to the case when you analyzed it on that first review?

16

17

18

A. I wouldn't call it a visceral reaction, I would not call it such, I would call it a cerebral reaction.

19

Q. All right.

20

A. To the best of my ability.

21

22

Q. And it was limited necessarily by the information you had available to you at the time of your review.

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A. Sure.

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Q. And just in terms of pointing out the difficulty of the task, you have also been referred to the cases of Baby Heyworth and Baby Murphy, do you recall those two cases?

A. I would -- let me just look them up for a minute, please.

THE COMMISSIONER: You mean the Murphy we are investigating?

Q. Yes, I'm not talking about the later Murphy, I am talking about Paul Murphy, one of the 36, Dr. Hastreiter.

A. Yes, okay.

Q. That is to be found, if you look at Exhibit 264 that is to be found at Page 214, and Hayworth at 218.

A. Okay. With regard to Paul Murphy --

Q. Well, you don't have to run through your analysis of that again because you have done that.

A. No, no.

Q. But both of those cases you assigned a "fair" rating on your first analysis, is that correct?

A. That is correct.





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Q. And you have been taken through  
and shown how by the time you reached the meeting  
that took place on September 13th, 1982, the Minutes  
of which are Exhibit 261, it would appear from there  
that you had altered your views of those two  
deaths from "fair" to "small", would that be correct?

A. That is correct.







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Q. Pages 19 and 20 of 261 you accord those two children a natural status by that time, right?

A. Let me just find it. What page was that again?

Q. Pages 19 and 20 of the minutes.

A. Right.

Q. And interestingly enough, if we look to Dr. Nadas' classification in the Atlanta Report for those two children, I understand Heyworth is 02015, we have Dr. Nadas according that child a status of expected, correct, in terms of death?

A. Yes.

Q. And Murphy, similarly, I understand the number to be 02010, he has also accorded the child an expected status, correct?

A. Correct.

Q. I think that maybe those two cases are illustrative of the fact that these categories you have assigned the children are not cast in concrete, so to speak?

A. That is true. I think these two cases are more or less exceptional. I had great hesitations when I first categorized them, but I was not totally sure about being able to exclude digoxin





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overdose. Then I would say that my classification was, as far as I was concerned, regarded as a preliminary type classification, and later, of course, in discussing the situation further with various members of the police force, the Crown, nurses, whoever knew about the situation, Dr. Bryson, I had ample opportunity to change my position.

Q. Sure, and I do not criticize you for that in the slightest. I think all these cases demonstrate is that there are subtle differences, depending upon the factors that are operating at the time you consider them?

A. Yes.

Q. Then, as another instance of the kind of difficulties that you would have encountered, Mr. Scott has already referred you to your perception of the Hines child, correct?

A. Yes.

Q. That is a child which you, in your analysis, disclosed by Exhibit No. 264 assign a good possibility or good probability of digoxin overdose, correct?

A. Yes.

Q. You have been taken to the Atlanta Report and Dr. Nadas' classification, and





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it would appear that he differs in terms of his opinion, correct?

A. I do not remember that, but I would disagree with him there.

Q. Right. Well, that is quite fair. In the Atlanta Report, I am referring you to Case No. 02057, which I understand is the Hines child, and he would have assigned the child ---

THE COMMISSIONER: What page is that?

MR. ORTVED: Well, my copy is not numbered, Mr. Commissioner. It is about six pages from the end. It is the table entitled "Ratings by Consultant Cardiologists".

THE COMMISSIONER: Oh yes, thank you.

MR. ORTVED: Q. I am referring to Case No. 02057, which I understand from the concordance is Baby Hines, and in terms of the timing of death, it was, according to Dr. Nadas, expected and consistent with his clinical condition, correct?

A. Yes.

Q. And inconsistent with digoxin overdose, correct?

A. Yes.







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Q. So we are not here concerned with who is right and who is wrong, but just that that is an instance of how two experts, both well qualified, can look at a case and come away with a different view, correct?

A. That is correct.

Q. Then again, in terms of the very subtle distinctions between the categories, can I refer you in Exhibit 264 to pages 20 and 21.

A. I am sorry, which exhibit is this?

Q. Exhibit 264 is your report, the large volume, Dr. Hastreiter.

A. Yes, I do not have a copy here with me but if you tell me the child's name ---

Q. Well, I am referring specifically to your comments in your report to Mr. Wiley concerning Kelly Monteith on page 20; do you see that?

A. Yes.

Q. If you turn over to page 21, Dr. Hastreiter, you will see that the last paragraph is to this effect:

"This infant had a very serious and potentially lethal type of congenital heart disease. However, the abruptness





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"of the terminal event was surprising.  
The possibility of digoxin overdose  
must be entertained."

Then it goes on to talk about who was caring for  
the child, which is of no interest to me.

Do you see your comment there about  
that child?

A. Yes.

Q. If I can then ask you to go  
back to page 19 -- I am sorry, page 16, Amber Dawson,  
again there is a paragraph concerning that child and  
then the comments read as follows:

"The reasons for the infant's acute  
terminal deterioration are not clear.  
The possibility of digoxin overdose  
exists."

Do you see that portion?

A. Yes.

Q. And lastly, if I can ask you  
to go over to page number 21, your comments concerning  
Real Gosselin; do you have that portion?

A. Yes.

Q. "This was again a very ill  
infant who was awaiting surgery. Once  
more, the abruptness of the terminal





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"events leading to the baby's death  
were unexpected. Digoxin toxicity  
must be entertained."

Now, firstly, will you just agree with me that your  
commentary concerning each of those three children  
is really quite similar?

A. Yes.

Q. We know from your Exhibit No.  
264, your actual sheets disclosing your analysis,  
that Kelly Monteith you assigned a rating of small,  
correct?

A. Yes.

Q. And Amber Dawson, you assigned  
a rating of fair?

A. Yes.

Q. And Real Gosselin, you assigned  
a rating of good?

A. Right.

Q. I think all that does is point  
up the very subtle shadings that existed between  
those three children and your analysis of each in  
terms of how to categorize them, correct?

A. Yes, but you should take into  
consideration the fact that the analysis that you  
are reading here is the first one, which was done at







Hastreiter, cr.ex.  
(Ortved)

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a very early stage. Then I reviewed the cases again, the second time around, which was when I classified them into these three groups that you mentioned. That was like a year later or so. By that time I had additional information. I had, of course, more laboratory reports available and so forth. So there was a difference.

Q. I appreciate that, but my simple point is that going by your report to Mr. Wiley found at pages 16 through 21, the portions to which we referred, what comes out of that is really a remarkable similarity between those three children?

A. Yes.

Q. And when they are categorized, they are eventually categorized into three different categories, right?

A. Yes.

Q. Lastly, just as another instance to illustrate the difficulty of the task which confronted you, you were referred yesterday to the Gage child; do you recall Mr. Scott talking with you about that child?

A. Yes.

Q. And in particular, taking you





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to Exhibit No. 261, which is the minutes of the  
meeting on September 13, 1982, at pages 228 and 229.

A. The minutes of the meeting?

Q. The minutes of the meeting.

A. Yes, I have them.

Q. Pages 228 and 229.

THE COMMISSIONER: Well, that is  
page 10 on the ---

MR. ORTVÉD: Q. Or pages 10 and 11.

A. Yes.

Q. There is reflected in that  
excerpt a discussion concerning Baby Brian Gage,  
correct?

A. Yes.

Q. And that was a child to whom  
you had assigned a category of good, correct?

A. Yes.

Q. It would appear from those  
minutes that, for instance, Dr. Fay was not as  
persuaded as you were of the possibility of digoxin  
overdose in that case?

A. Yes, his index of suspicion  
was somewhat lower than mine.

Q. It was very low, correct?

A. Right.





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Q. Dr. Fay, you have told us, is  
a respected cardiologist, correct?

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A. Yes. I would not say very low.  
It was low. It says right here low suspicion, low  
suspicious.

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Q. Well, I am looking at his  
comments reported on page 228 or page 10, Dr. Hastreiter,  
the second paragraph under Brian Gage, do you have  
that?

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A. Yes.

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Q. Where Dr. Fay stated his  
suspicion would be very low unless given further  
information; do you have that?

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A. Yes, there it says very low.

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Q. And Dr. Fay, you have told us,  
is someone whose opinion you respect, correct?

A. Yes.

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Q. Then when you come to the  
vote on the case, we do not have the commentary of  
Dr. Bennett and Dr. Tepperman, but as is reflected there,  
Dr. Bennett indicated he was low suspicious, correct?

A. Yes.

Q. And Dr. Tepperman indicated  
minimum suspicion?

A. Right.







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Q. Again, Dr. Bennett is someone whom you have come to know over your association with this case?

A. Yes.

Q. Someone in whom you feel competence in his opinions?

A. Very much so.

Q. I suppose the same goes for Dr. Tepperman?

A. Yes.

Q. The only point arising out of that is that these are illustrative of how opinions concerning the same case will vary, depending on the subjective view of the person expressing them?

A. That is correct, but you also know that the purpose of the meeting was exactly to pool the various opinions and to try and condense them into sort of a final decision, and this is what happened. But there was some discrepancy.

Q. There were differences of opinion?

A. Yes.

Q. This is the kind of exercise in which reasonable men may honestly differ?

A. Right.





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Q. I take it that going back to that meeting, September 13, 1982, the other medical men there were aware of the fact that in assigning your category of good to those babies to whom you did, that really it was the sudden and unexpected nature of the death that were the markers that qualified them for that category, correct?

A. Yes.

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Q. You have acknowledged ---

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A. Those were the primary factors.

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There were other factors such as the type of heart disease that they had and so forth, but the unexpectedness and abruptness were very critical factors.

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Q. But I take it that the

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factor of the kind of heart disease would enter

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into your determination as to whether or not the

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death was sudden and unexpected?

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A. Yes, it would.

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Q. And that is a subtle and complex

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question.

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A. Certainly.

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Q. It is one on which you would

not necessarily have expected unanimity.

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A. That is correct.

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Q. And in terms of there not being

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unanimity, you already acknowledged how in respect

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of the great majority of those babies in the good

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category there was room there for legitimate divergence of opinion.

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A. Yes.

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Q. And I don't intend to run

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through all those babies in any detail, but for

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instance in relation to Baby Taylor, as one example,

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2 you will recall that child -- that is Page 198 of  
3 your report, 264.

4 A. Yes.

5 Q. That was a child with an  
6 aortic stenosis?

7 A. That is correct.

8 Q. And one of those lesions which  
9 you have acknowledged in your evidence before the  
10 Commissioner can result in sudden and unexpected  
11 death?

12 A. That is correct.

13 Q. And that I guess in and of itself  
14 provides a legitimate basis for a divergence of  
15 opinion as to whether or not the death is expected  
16 or unexpected.

17 A. Yes, to a great degree I would  
18 say.

19 Q. And I take it that although you  
20 initially assigned that child the category good when  
21 you considered that case in the light of the commentary  
22 of your colleagues at the meeting on September 13th,  
23 1982, you were prepared to moderate your view some-  
24 what. I am referring to Page 230 or Page 12 which  
25 indicates in the vote suspicious death:

"Baby with a severe aortic stenosis







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could die suddenly."

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Right?

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A. Yes.

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Q. Secondly, dealing with Baby

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Shrum, that is at Page 209 of your Exhibit 264,

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and if I could also have you turn to Page 11 of

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Exhibit 261 in particular the vote concerning

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Dion Shrum.

A. Yes.

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Q. It is apparently there that

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Drs. Fay , Bennett and Tepperman didn't necessarily

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agree that this was a case in which there was a good

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probability of digoxin overdose, right?

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A. That is correct. Well, my

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index of suspicion was not that high. It said

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suspicious death, that was one of the categories,

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it was a higher category than theirs.

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Q. Yes. You see, that is my point

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because on your initial run through of this case as

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disclosed by Exhibit 264 you assigned that child a

good category, correct?

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A. Yes, but that is different.

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You see, that was purely a clinical impression at

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that time and later my final vote here or opinion

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takes into consideration everything else that was

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2 available; information from other sources, discussion  
3 with different people. So, I don't think -- I think  
4 my first report should be regarded as a preliminary  
5 observation which is to be incorporated into a sort  
6 of global type of decision eventually, a decision  
7 by a group.

8 Q. I understand.

9 A. Many people.

10 Q. But my impression was that when  
11 you commenced at that meeting on September 13th, 1982  
12 and gave your outline of the case, so to speak,  
13 that you were endeavoring to do so on your purely  
14 clinical review.

15 A. Yes.

16 Q. To the extent that you are  
17 able.

18 A. Yes, that is correct.

19 Q. And we know from Exhibit 264  
20 that on your initial review of Dion Shrum's case you  
21 assigned it a category of a good probability of digoxin  
22 overdose.

23 A. Yes. I am pretty sure that  
24 when I presented him at this meeting of September 13th  
25 that I started out saying that I felt he belonged into  
that category but then there was a great deal of





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2 discussion, possibly information that I had not had  
3 before and so forth and eventually when it came to  
4 the time of voting I had changed my impression a  
5 little bit, I had brought him down to a suspicious  
6 death.

7 Q. You see, I just want to pursue  
8 that because, as I understand it, when you remained  
9 of the view that there was a good possibility of  
10 digoxin overdose then your vote was probable murder,  
11 wasn't it?

12 A. No, not necessarily. No, you  
13 see these two categories are not totally related. The  
14 first classification, the clinical classification  
15 means that the first group we can exclude, the small  
16 probability, exclude completely.

17 Q. Yes.

18 A. The fair and good we have to  
19 pursue and get additional information as much as  
20 we can. The fair are the ones with the very or a  
21 low index of suspicion, but whom I cannot completely  
22 exclude. The good ones are those in whom there  
23 was something else in addition that made it a higher  
24 probability case. But that doesn't mean that they  
25 were probable murders necessarily when it came to the  
final meeting where in many cases we had toxicology,







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2 we had additional information and then we had to put  
3 everything together. So, these are two different  
4 categories and different classifications. The  
5 purpose was different. You see, the purpose of the  
6 second meeting, September 13th, was to try and arrive  
7 at a final decision with all information available,  
8 not just clinical, and as I indicated earlier, we  
9 had a great deal of pressure from the parents and  
10 from the public, the press and so forth. So, we had  
11 to explain to the parents what the situation of their  
12 baby was and this was, I believe, the main purpose  
13 of the meeting.

14 Q. Well, Doctor, would you look  
15 with me at Page 2 of Exhibit 261, please.

16 A. Yes.

17 Q. There you have told us these  
18 minutes, how the terms good, fair and small should  
19 correspond with the ratings developed by the  
20 Homicide Squad, correct?

21 A. No, I don't agree with that  
22 because the two classifications are not, they don't  
23 match exactly, one is clinical.

24 Q. Well, let me just ---

25 A. I don't see how you can compare  
a purely clinical classification with a classification





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2 which incorporates toxicological findings, circumstances  
3 in which the child died, perhaps other than medical,  
4 perhaps whether the child was in a single room or  
5 alone or was with multiple patients, whether she was  
6 watched closely or not, things in which I had very  
7 little to say but for which the final conclusion may  
8 have played little role.

9 Q. Doctor, just bear with me.

10 A. Yes.

11 Q. You see the portion on Page 2  
12 where it says "good". It says:

13 "Dr. Hastreiter explained the meanings  
14 of the classifications he used for each  
15 case when looked at from a medical stand-  
16 point to consider massive digoxin over-  
17 dose."

18 A. Yes.

19 Q. "Good - would correspond to  
20 the homicide team's categories of  
21 (A) and (B) --"

22 And we know from Page 1 those are murder or probable  
23 murder, right?

24 A. Yes.

25 Q. Fair would correspond to  
suspicious, right?





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A. Yes, I see that.

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Q. And small would correspond to natural, right?

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A. Yes. But again I don't totally agree with that.

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MR. OLAH: Excuse me, Mr. Commissioner. In all fairness to the doctor, the second last paragraph above the name Hines should be read also so that the whole matter is in context.

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THE COMMISSIONER: The second last what?

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MR. OLAH: That is:

"Dr. Hastreiter advised that when he developed his classifications, he did not pay attention to tissue analysis; they were based purely on clinical symptoms before the toxicology analyses were done."

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MR. ORTVED: Well, that is what you have told us here today, correct, Doctor?

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A. That is correct.

Q. My only point is that when you in reporting upon your clinical view felt that it was a good possibility of digoxin overdose, I take it that you would indicate your preliminary vote to be





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probable murder. Now, that might be moderated by your colleagues' comments, but if you felt the possibility was good, then it corresponded either with murder or probable murder, that is what you have told us, correct?

A. I never used the word "murder" because mine was a medical decision. So, when I first presented the case I would say it is a good probability or a very small probability that an overdose occurred in this particular case. Then Dr. Fay would give his opinion, then the toxicologist would give his opinion and so forth and then at the end the word murder, probable murder, suspicious and so forth would enter.

Q. Well, let me just follow this up because when you first looked at the Shrum child you assigned it the category of good, right?

A. Right.

Q. When you came to report to the meeting, as indicated here at Page 11 concerning Baby Shrum, you indicate, as disclosed by the minutes, that you classified that child as suspicious, right?

A. Yes.

Q. Now, going by Page No. 2, which purports to reflect your description of the terms,







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2 suspicious, I read this as corresponding with fair;  
3 right or wrong?

4 A. I would say roughly yes but  
5 there is no exact correspondence. This is what I  
6 am trying to say. You can't compare apples and  
7 oranges, really, they are two different things.

8 Q. Isn't what you are telling me  
9 this: that the distinction between these categories  
10 becomes blurred?

11 A. No, I'm not saying that. All I  
12 am saying is that one was a purely clinical classifica-  
13 tion, the other is a more complex classification which  
14 takes into account other situations. I don't see how  
15 you can exactly compare them.

16 Q. Dr. Hastreiter, if you look at  
17 the first paragraph of the report of the meeting on  
18 Page 11 under Dion Shrum, as I understand how you  
19 have described that meeting you had not by that  
20 point in time received the commentary of your  
21 colleagues concerning factors other than the clinical  
22 factors, isn't that right?

23 A. Yes.

24 Q. And without having had any  
25 input from any of your colleagues, you have assigned  
a classification of suspicious to Dion Shrum.





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A. Okay.

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Q. And suspicious we know from page  
2 corresponds with fair.

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A. Well, here is where I again  
say that there is no exact correspondence between  
these two although it is stated on Page 2 that this  
is so. I don't totally agree. I think there is  
some variability between one and the other. There  
is no exact correspondence.

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Q. What is reported on page 2 ---

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A. I think roughly there is, but  
not...

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Q. What is reported on page 2 is  
that if in fact you felt that on September 13th, 1982  
Dion Shrum was a good possibility for massive  
digoxin overdose, then you would indicate that to  
be probable murder, as you have with, for instance,  
the first case, let's take Jordan Hines.





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A. I am sure you will find other situations here where I had classified the child in a "good" category, and where I had not indicated was "probable murder". Of course I have to follow the classification at the meeting, and I had to transfer one classification, translate one classification into the other, but not all cases that were classified as "good" clinically fell into the category of "probable murder" at the meeting, although I am quite sure, although I didn't really ---

Q. We know that they didn't, and that is my point that when it came to September 13th, 1982, the distinctions between the categories were subtle enough that they may have altered slightly by the time you got to the meeting, and I think that is what you are telling me?

A. That is correct, but I also feel that perhaps the description of the categories on page 2 of the Minutes of the Meeting are probably not totally accurate, in other words, my -- a clinical classification does not necessarily imply that the child would have to fall into one of these categories.

Q. Insofar as Dion Shrum is concerned, I take it that one of the reasons you might feel that that case was suspicious only as







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opposed to a higher category of "probable murder" is  
by virtue, as you have told us, of the, firstly the very  
serious lesion from which that child suffered, right?

A. Right.

Q. And you have told us also that  
you can get the type of event from which this child --  
which this child appeared to suffer following a  
catheterization procedure?

A. Yes.

Q. And that I guess in and of  
itself again provides a legitimate basis for that  
divergence of opinion as to whether the death is  
expected or unexpected, right?

A. Yes.

Q. Let me just deal very briefly  
with Gosselin; that case is reported at 237 of your  
report, Exhibit 264; it is also to be found at  
page 9 of Exhibit 261 as discussed at the meeting  
of September 13th, 1982.

You will recall here that in terms of  
the Gosselin case, Mr. Lamek pointed out to you in  
his examination in chief, that Dr. Fay when he  
attended here advised that had he known certain  
information that he was made aware of by Mr. Lamek  
he would reclassify that death as a natural death;





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do you recall being told that?

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A. Vaguely.

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Q. That reference is Volume 77.

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THE COMMISSIONER: The information  
was I think Dr. Freedom's evidence, wasn't that it?

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MR. ORTVED: Yes, page 6864.

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THE COMMISSIONER: It is not really  
so important what Dr. Fay did as what Dr. Freedom  
did.

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MR. ORTVED: Right.

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Q. But having regard to the  
information regarding Dr. Freedom, that Dr. Fay would  
reclassify this death as natural, is my point. And  
again looking at this child, Dr. Hastreiter, we know  
for instance that it had a very serious lesion,  
correct?

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A. Yes.

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Q. Aortic stenosis, hyperplastic  
left ventricle.

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Q. Gosselin.

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A. Coarctation of the aorta was  
the primarily lesion; aortic stenosis was essentially,  
was a clinical impression but it was eventually ruled





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3 out. There was a bicuspid aortic valve and a hyper-  
4 plastic left ventricle, but the hyperplastic left  
5 ventricle of course depends on the degree, it could  
6 be very small, it could be moderately small, it  
7 could be just a little small, so there is -- this  
leaves a little room for debate.

8 Q. But having regard to what was  
9 eventually known about this child, I take it that  
10 it is one which you are prepared to concede may have  
died before reaching surgery?

11 A. Yes. The possibility certainly  
12 exists that the child may have died before reaching  
13 surgery.

14 Q. Particularly in the context  
15 of his failure to respond to the prostaglandin therapy  
16 that you were aware of.

17 A. That is correct.

18 Q. And actually you conceded  
19 yesterday, Volume No. 79, page 7270, that really  
that was a death that on reflection is not unexpected.

20 A. No, I would agree with that.

21 Q. And I guess in you're also  
22 saying you are in effect confirming that basis for  
23 Dr. Fay to differ in terms of his opinion as to  
24 whether or not the death was unexpected or not, right?  
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A. Well, you know, as I mentioned so many times it is a matter of probability. Here I think this child certainly could have died naturally, could have died because of its original problem. However, the big question is whether we can rule out anything else that caused the child's death, and I don't think we can.

Q. I understand. But these cases that I have reviewed briefly, Dr. Hastreiter, Shrum, Gage, Gosselin, Taylor, those cases I think point out the difficulty of the exercise that you were engaged in, do you agree?

A. Definitely, it is a difficult exercise and there is some discrepancy.

Q. And these cases, really I don't think there is probably a single one that is clear cut.

A. There are some that are easier than others. I don't think there is anything in medicine that is clear cut really.

Q. But clearly opinions even among those of you who were working together, as reflected in the Minutes of the September 13th, 1982 meeting, medical opinions, they can differ and differ legitimately?







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A. Yes, to some degree.

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Q. Now I wish to deal briefly with two cases that were not reviewed with you by Mr. Scott, and those are Babies Lombardo and Belanger. Now, as I understand it those were two cases that you didn't review in the initial analysis.

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A. Right.

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Q. Those were reviewed following the preliminary hearing?

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A. Correct.

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Q. At the preliminary hearing you were made aware of certain toxicological evidence in relation to those two children?

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A. Yes. Do you know what pages they are in the ---

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Q. Of your report, yes; Lombardo, which I will deal with first, Dr. Hastreiter, is page 240.

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A. Okay.

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Q. And Belanger is page 243.

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A. Thank you.

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Q. Baby Lombardo is the one, the baby suffering from pulmonary stenosis in whom a shunt was installed and who later returned from the ICU and died on the ward; do you recall that case?

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A. Yes.

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Q. Pulmonary stenosis is again a  
very serious malady.

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A. Yes, it is more than a pulmonary  
stenosis, it had a combination of pulmonary stenosis  
with large ventricular septal defect which becomes  
a tetralogy of Fallot.

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Q. Is pulmonary stenosis serious,  
is pulmonary stenosis one of those lesions which you  
indicated to us earlier can result in sudden death?

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A. Yes, I did, but I was talking  
about pulmonary stenosis, isolated pulmonary stenosis,  
not this one, this one is a combination of pulmonary  
stenosis with a ventricular septal defect, it is  
a different lesion.

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THE COMMISSIONER: And you say that  
is the distinction between pulmonary stenosis and  
tetralogy of Fallot?

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THE WITNESS: Yes.

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THE COMMISSIONER: There is a  
ventricular defect?

THE WITNESS: Yes. Tetralogy of  
Fallot has a large ventricular septal defect with  
the pulmonary stenosis; and babies with tetralogy of  
Fallot are usually cyanotic, blue, because the blood





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3 is able to cross from the right side, shunts across;  
4 whereas in pulmonary stenosis (isolated) the partition  
5 is intact, so babies are usually not blue, they are  
6 not cyanotic because blood has to go to the lungs  
7 despite the obstruction there, except in very young  
8 babies sometimes it could shunt across at the atrial  
9 level, it just pushes open the atrial septum and  
10 then shunts across to the other side.

11 MR. ORTVED: Q. In any event,  
12 dealing with Stephanie Lombardo, we have an infant  
13 in whom surgery has taken place at a very young age,  
14 three or four days of age.

15 A. That is right.

16 Q. And this surgery is - I mean,  
17 there is no surgery in these young infants which is  
18 minimal, even a balloon septostomy is serious, but  
19 this is invasive surgery installing the shunt, right?

20 A. Every surgery is invasive  
21 by definition. This is a palliative type of operation  
22 which sometimes is not as successful as one would like  
23 it to be.

24 Q. But my point is that with a  
25 balloon septostomy this is done with a catheter which  
is inserted into the vein and doesn't require  
incision, other than to insert the catheter, whereas







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here we have major surgery.

A. Yes, a thoracostomy, it is called a chest incision.

Q. The shunt as you will have remarked from your review of the chart was felt to be marginal.

A. Excuse me just a second, let me look at this; yes, the shunt was felt to be small.

Q. There was only a cystolic murmur noted, do you recall that?

A. Yes.

Q. Not the optimal type of finding where such a shunt has been installed?

A. Well, I could argue with you a little bit. I think the shunt was small, I would concede that, no question about it. It was not so small that they were so terribly concerned all along, because you know, the baby - let me see the date of surgery was the 16th of December, and the baby was extubated, that means that they took the tube out of the airway on the 18th, two days later. On the 22nd the baby was transferred back to Ward A, or B, I am not sure now. Usually this is only done when they feel that the baby is relatively stable,





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they wouldn't transfer a baby from the ICU to the floor unless they felt the baby was reasonably stable.

At that time, I think I mentioned yesterday that the best indicator of the size and quality of the shunt is the  $pO_2$ , the arterial  $pO_2$ . Here we have an arterial  $pO_2$  of 43 at that time, which is I think reasonably good, it is not optimal, but it is not terribly bad, and then of course the arrest occurred on the 23rd which was one day later.

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On the 19th of December, Dr. Jedeikin said that -- there is a note by him, I think, in the chart that indicates that one must assume good shunt function, although the murmur was only systolic. It was not a systolic diastolic murmur, which would be the ideal situation.

On the 22nd the baby was described as pink, and they discontinued the oxygen, indicating that the concern -- there was some concern. I am not denying it, but it was not a very high level of concern. Then it also says that the parents were generally pleased, and this was only 12 hours before the baby died.

I think even Dr. Rowe in his evidence here indicated that death was somewhat sudden and unexpected, although he eventually felt that possibly an occlusion, complete occlusion of the shunt would be an explanation for it.

Q. Well, the occlusion of a shunt, especially having regard to the very small shunt that was here installed, is a very viable likelihood in terms of cases such as Stephanie Lombardo?

A. Was an autopsy performed? I forget.

Q. No.





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A. Oh, there was no autopsy, so we cannot prove -- you know, I would have expected if the shunt were to have occluded that the  $pO_2$ s would have come down and the last  $pO_2$  that we have here was on the 21st or 22nd, which was one or two days before the child died:

I do not see anything else later to compare it with, so I cannot really say one way or another whether this happened or not. But if there was such a great concern about it, I would think that they should have repeated the blood gases or obtained blood gases later.

Q. Well, apparently they tried on the 22nd and it was not available, on page 102 of Exhibit No. 78, the hospital chart; do you see that?

A. Yes, they had a blood sample there but they could not do the  $pO_2$ . I do not know why; I do not know the reason.

Q. But my simple point is that whatever be the preliminary indications, shunts of minimal size can occlude?

A. Yes, they can.

Q. When they occlude, they can lead to a sudden change in a child's condition?

A. Oh yes.







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MR. ORTVED: I am going to go on and deal with Belanger. Maybe this would be a good time to break.

THE COMMISSIONER: We will take 20 minutes now.

--- Short recess

--- On resuming

THE COMMISSIONER: Yes, Mr. Ortved.

MR. ORTVED: Thank you, Mr. Commissioner.

Q. Dr. Hastreiter, happily I am near conclusion. Regarding Baby Belanger, I think I indicated that was to be found at page 243 of your notes.

Again, we have a child in whom, in view of pulmonary stenosis, we have a shunt installed because of falling  $pO_2$ s, right?

A. Yes, had a low  $pO_2$ , very low.

Q. Again, there is a degree of concern about the shunt that was installed; do you recall that?

A. Yes.

Q. Do you recall also that in your review of this chart there was concern about the child's





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respiratory status?

A. Yes.

Q. You have told us that in coming to your opinion about this child's status prior to his demise, you were persuaded by the fact that he had been transferred down to the ward from the neonatal intensive care unit up on 7G, correct?

A. Yes.

Q. In fact, when you looked at the transfer note, as I am sure you did in your review of that chart, at the time he was transferred down he still had a collapsed left lung; do you recall that?

A. Yes.

Q. In addition, on autopsy there were findings consistent with the partial Di George syndrome?

A. Yes.

Q. That is a syndrome which can predispose an infant to sudden death?

A. Yes.

Q. So insofar as both Babies Lombardo and Belanger are concerned, you acknowledge here that really it was the toxicology that was of particular importance in relation to those two children, correct?





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A. Well, I think I should state that the toxicology was only obtained because there was some degree of suspicion from the clinical history of these children that toxicology may be helpful. This was why it was obtained. I think again here, if you will let me just briefly go over this, I would agree that the baby has a serious problem, a cardiac problem as well as the Di George syndrome which, as you indicated, can produce sudden death probably for two reasons. One is that it affects the immune responses of the body so that the baby would be susceptible to infection, and secondly, because it produces a low calcium level in the blood because of so-called hypoparathyroidism.

Then the baby had the surgery performed. The baby was only two days old at the time of admission, I understand, and had the surgery performed at about six days -- no, the surgery was performed, let me see, one month later, on the 23rd of December, I believe. I hope I have this right.

Q. Well, if I can iterrupt you, Doctor, and I do not want to cut you off, but you ran through your analysis of this case with Mr. Lamek, and for my purposes I do not need you to repeat it.

The simple point I wish to make is that







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there are disease processes at work in this child which can explain the death absent digoxin intoxication?

A. I was repeating it mainly for myself here.

Q. All right. Well, I do not want to interrupt you, but I do not intend to deal with it further unless you wish to.

A. No. I do not think there is any question that the problems here could explain the child's death. However, again, it is a matter of probability, and the suddenness of this terminal event and the unexpectedness led us in fact in this case to, I believe, eventually have the body exhumed.

Q. Right, and I take it that one of the additional and maybe principal criteria in leading you to have this body exhumed is because it was one of the few children on the ward that was not apparently receiving digoxin; that was a factor too, right?

A. That was a helpful factor. When we first decided to exhume bodies, we did not know how helpful that was going to be, but it turned out to be a very helpful factor. It turned out that children who had received digoxin earlier, the presence of digoxin in tissues was rather difficult





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to interpret, whereas in a situation like this it was easier.

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Q. Right, and that is why in testifying and in examination by Mr. Lamek you conceded that that information was of great importance in respect of Babies Lombardo and Belanger?

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A. Yes.

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Q. I guess to sum up, looking at all of these 36 cases, you have told us that in light of the Murphy case, you have got to approach cautiously those cases where there is no toxicology available?

A. Certainly.

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Q. And that comes back to where you started, namely, the fact that death due to digoxin intoxication can mimic what may very well be a natural death, correct?

A. Oh yes. Digoxin, as I said many times, has no specific symptom as such, and the terminal events could be related to many different things.

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Q. The Murphy case, as we know, took place in the period following the analysis about which we have been speaking this morning, right?

A. Could you repeat that, I am sorry.





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Q. The Murphy case, the Gary Murphy case took place in a period after you had completed this analysis?

A. Right.

Q. And I take it, the caution which it pointed up must be exercised certainly existed at the time that you had performed this analysis, but was really reinforced by the Gary Murphy case?

A. What was reinforced?

Q. The caution that must be applied in dealing with cases where there is no toxicology?

A. I think, you know, you cannot prove digoxin toxicity without toxicology. You can never do that. So, you have to try and obtain it when possible and when interpretable. Of course, the child that was already receiving therapeutic digoxin, we thought about possibly having the body exhumed, but sometimes it is so difficult to interpret that we did not feel that this would help. I think you have to be cautious in every case, and we knew that from the beginning. I do not think that the Gary Murphy case added any indication that more caution was necessary than we had from the very beginning. I think we realized this from very early on.







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Q. Insofar as toxicology is concerned, I take it that the lesson to be taken out of the Estrella case is that even where you have toxicology, there is a degree of caution that has to be exercised?

A. Of course. The source of the samples is very critical and the type of analysis that is performed is very critical. Fortunately, I think, with regard to the type of analysis, reliability, we do not have to worry about the analyses which were performed at the Centre of Forensic Sciences, and some were performed only at hospitals such as the Hospital for Sick Children or the Toronto General, I believe.

These are large centres, reputable and so forth, so we do not have this problem. But we do have to interpret every sample with a great deal of caution, certainly.

Q. But I take it that what the Estrella case has taught us is that we are still learning about the drug digoxin?

A. Well, we will always be learning about everything, I think. There is no complete knowledge of anything. We have learned a lot about the pharmacokinetics pharmacology of digoxin since the beginning of this investigation, I will admit that, and there has been a great deal of additional information provided.







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Q. And specifically insofar as the Estrella case is concerned, what in 1981/82 was felt to be toxicology that was reliable in the fullness of time has proved to be toxicology which is not necessarily reliable, correct?

A. That is correct.

But this was a very unusual situation. This whole gutter blood thing is a very special situation.

Q. I understand. But just on that topic, as I understand your evidence, you really didn't know about that study until you appeared here to testify, is that right?

A. I didn't know about the details. I knew about the study, but I didn't know the data until I was shown them here.

Q. When would have been the last time that you would have seen Mr. Cimbura before appearing here?

A. Let me see. I'm not sure that I was here after this meeting in September.

Q. Let me take you back to the inquest concerning Baby Murphy, did you see Mr. Cimbura then?

A. Yes, I did.





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Q. Did you see Dr. Bennett

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then?

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A. Yes.

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Q. You certainly saw Sergeant Warr  
and Staff Sergeant Press then?

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A. Right.

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Q. And that was in, when, spring  
of this year?

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A. Yes.

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Q. Did anyone mention then that  
there had been these results received in relation to  
the gutter blood study?

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MR. HUNT: Well, don't you have to  
ask first whether there was any discussion other  
than Baby Murphy at that time?

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MR. ORTVED: Well, no, I don't have to  
ask that. I am aware of the rules of cross-examina-  
tion.

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Q. Did anyone mention at that time  
the results of the gutter blood study?

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A. I don't believe so. I don't  
think we in fact discussed any other cases other than  
Gary Murphy.

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MR. ORTVED: Thanks, Mr. Hunt!

Q. Well, I take it you are aware





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2 from Dr. Hastreiter's report -- you have seen that,  
3 I guess, haven't you?

4 MR. OLAH: Dr. who?

5 MR. ORTVÉD: Q. Dr. Kauffman's report.

6 A. Kauffman's report?

7 Q. Exhibit 266.

8 A. I have seen some of it.

9 Q. Have you seen his report to Jerome  
10 F. Wiley?

11 A. Oh, yes, I have, a long time ago.

12 Q. A long time ago. When would you  
13 have seen that?

14 A. When he first provided it.

15 Q. All right. Did you see his report  
16 dated January 17th, 1983 to Mr. Wiley?

17 A. I don't remember the dates.  
18 Could I look at the first one because I am not sure.

19 Q. Yes. What was the date of the  
20 first one, do we know?

21 A. Yes.

22 Q. Yes, it was December...

23 THE COMMISSIONER: December 16th.

24 MR. ORTVÉD: Q. December 16th, 1982.

25 A. And this was shortly, a month  
later or so, yes, January 17th. I believe that I saw it







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at the time, yes.

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Q. All right. And Dr. Kauffman deals with Janice Estrella in that second report dated January 17th, 1983 and really revises substantially his opinion earlier expressed in his report dated September 16th, 1982, do you agree?

A. Yes, he states here that there is a high degree of uncertainty of any interpretation of the concentrations measured in gutter blood.

Q. Right.

And that report dated January 17th, 1983 was premised on additional information regarding several of the deaths occurring in the hospital, right?

A. Yes.

Q. So, I take it you were aware back in January of 1983 or thereabouts that there was additional information concerning the Estrella case that certainly caused Dr. Kauffman to substantially alter his view, right?

A. Yes, I was aware of that, but I wasn't aware of the actual data on which he based his opinion.

Q. But I take it what you are telling me is that you were aware that it was data that called





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2 into question the reliability of digoxin found in  
3 body fluid or gutter blood, right?

4 A. No, I wasn't very impressed  
5 by that because I had heard a lot about it. I had  
6 heard that the hospital, some of the pharmacologists  
7 at the hospital were doing studies in rats, for  
8 instance. But I couldn't very well transport rat  
9 data to humans very well. Secondly, I knew that  
10 Mr.Cimbura was doing gutter blood studies with the  
11 hospital pathologists in humans and that they had  
12 collected a certain number, I don't remember how  
13 many, and that the gutter blood tended to be a little  
14 bit higher, but it wasn't very high, it wasn't any-  
15 thing like, ten times the blood values as had occurred  
16 apparently in some rats.

17 So, I wasn't really impressed until I  
18 was told just recently, last week, that there was this  
19 one value in gutter blood in humans that was so high,  
20 completely out of proportion. This was the only  
21 evidence that I had so far that makes gutter blood  
22 unreliable, plus, the theoretical considerations of  
23 possible contamination by fecal materials, things  
24 like that. But that again has not been shown, at  
25 least it has not been shown with one exception be-  
cause there were, I think, 14 sample studies, 14





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2 patients, and only one out of 14 had this high  
3 value.

4 Q. Well, Dr. Hastreiter, did you  
5 ever take it upon yourself to ask Dr. Kauffman what  
6 information had caused him to alter his opinion con-  
7 cerning the Estrella child?

8 A. No, I didn't because I didn't  
9 have it really. I didn't meet with Dr. Kauffman.  
10 I had been sent this material and I was quite certain  
11 that we would meet again eventually to discuss this  
12 again and I had no reason at that time to, you know,  
13 look into it further.

14 Q. And have you discussed the  
15 matter with him or been made aware as to whether there  
16 was any basis other than the gutter blood study that  
17 was circulated in December, January, 1983 as to  
18 why he changed his opinion?

19 A. No, I never had a chance to  
20 meet with him again, really. I was at several meetings  
21 with other, like, scientific meetings. There was  
22 a meeting here at the Hospital just a few weeks  
23 ago where he and I participated, but I never really  
24 had a chance to talk to him about the cases.

25 Q. If in fact it was the gutter  
blood study which had been filed here as Exhibit 238







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2 that caused Dr. Kauffman to alter his views, I take it  
3 you agree with me there is nothing in that study that  
4 speaks to the subject of contamination with fecal  
5 material.

6 A. There is nothing in the study  
7 that directly states that, but the reason for the  
8 high value in gutter blood, one of the hypotheses  
9 would be contamination by fecal material.

10 Q. Right. And that is a hypothesis  
11 that you have heard in your cross-examination by Mr.  
12 Hunt, was ventilated here, correct?

13 A. Yes.

14 Q. But there is nothing to indicate  
15 that it was ventilated or raised by anyone, specifically,  
16 Dr. Taylor, as of the point in time that Dr.  
17 Kauffman so substantially altered his view back in  
18 January of 1983, right?

19 A. Well, I'm not really familiar  
20 with the circumstances. All I know is that at the  
21 preliminary hearing Dr. Taylor made no indication of  
22 the fact that this sample could have been contaminated  
23 by fecal material. He said that he specifically stated,  
24 I believe, that the sample might have been contaminated  
25 by edema fluid or ascitic fluid and this in my opinion  
would not increase the concentration of digoxin but would







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2 possibly reduce it by diluting the digoxin concentra-  
3 tion in the blood. So, I wasn't concerned about that.

4 I found out much later, I think just  
5 last week, that Dr. Taylor, when he was here at this  
6 court, that he indicated then the possibility that the  
7 sample might have been contaminated by fecal material  
8 or urine.

9 Q. Well, are you aware or have  
10 you performed studies where blood has been diluted  
11 with either ascitic or edema fluid.

12 A. I haven't done it myself, but it  
13 is very easy to calculate what the final concentration  
14 would have been. If you know the concentration in  
15 edema fluid or ascitic fluid and you know the  
16 concentration in blood, if you mix the two in certain  
17 proportions, depending on the proportions that you  
18 mix them with, you can calculate what concentrations  
19 you would find.

20 Q. And I take it that what we  
21 are talking about is pure edema fluid or pure  
22 ascitic fluid.

23 A. Yes, but you don't know how much  
24 edema fluid would mix with how much blood. If the  
25 concentration in edema fluid is much lower than blood  
and if you mix a lot of edema fluid with a little blood





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2 you would have a very large significant effect. If  
3 you mixed just a little edema fluid with a lot of  
4 blood you have practically no effect.

5 Q. But in any event it comes down  
6 to the concentration in the edema fluid or the  
7 ascitic fluid.

8 A. Right.

9 Q. And it comes down to the  
10 subcategory of how pure the edema or ascitic fluid  
11 was, right?

12 A. Well, as long as it is not  
13 contaminated with anything from the GI tract,  
14 it could increase the concentration, yes.

15 Q. But that I put it to you is  
16 something that is eminently possible in the course of  
17 an autopsy?

18 A. Well, it shouldn't be. That  
19 type of fluid should not be used for an analysis.  
20 If they suspected it might have been contaminated  
21 it shouldn't be.

22 Q. Right. So, we are talking about  
23 theories here about which we don't know the answer.

24 THE COMMISSIONER: Just a moment.  
25 I don't think that was quite the answer to the  
question. If in an autopsy there is this tendency,





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2 is there not, to cut the bowel, and that is why  
3 the fluid from the bowel or the contents of the  
4 bowel get into the pelvic cavity, isn't that what  
5 happens?

6 THE WITNESS: That is true. They cut  
7 the bowel, take it out and this will be a source of  
8 contamination. But that is not edema fluid.

9 THE COMMISSIONER: No, no, that's where  
10 the -- but if you ever take it at autopsy, and unless  
11 you take it before the bowel is cut, whether bound  
12 or not bound, it is quite possible to get contamination, isn't that not right?

13 THE WITNESS: Oh, yes, yes. If you  
14 took ascitic fluid, the same would occur.  
15 You should take it before the bowel is cut.

16 THE COMMISSIONER: Yes.

17 MR. ORTVED: Q. That's my point.

18 And that is something that you as a  
19 physician can contemplate even without hearing about  
20 the actual autopsy that was performed, it is a  
21 possibility you can't exclude.

22 A. Well, I would have to know how  
23 this fluid was obtained, where it was obtained, how  
24 and what time, was it obtained before or after they  
25 cut the bowel and things like this.







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Q. Exactly. That is precisely it.

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A. I think ordinarily if a person is looking for digoxin in the fluid, I would imagine that he would try and obtain the fluid before the bowel is cut, you know, in order to prevent this uncertainty here.

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Q. Right. In fact, I take it that you know from the evidence concerning the autopsy given by Dr. Taylor at the preliminary inquiry that in fact he forgot all about obtaining the sample until he had to go back and do it.

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THE COMMISSIONER: You said until. He forgot all about it and then he had to go back.

MR. ORTVÉD: Right.

THE COMMISSIONER: He remembered it some time before he went back because that is when he went back.





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Q. That's right, but he forgot about doing it until after he had completed the autopsy that he commenced to do.

A. Yes, that's right. I think retrospectively, looking back, the possibility of contamination should be taken into consideration. However, at the time of his evidence at the preliminary meeting nobody really brought forth this hypothesis of contamination, he didn't either, he never mentioned it, except contamination with edema or ascitic fluid, but these fluids are generally clean, you know.

Q. All right, generally they are clean, but if - after the bowel has been cut you can't exclude the possibility that they too are contaminated?

A. No, you can't, but this should have been brought up I think specifically at the - when he gave his evidence at the meeting, because he would be the one who did it, he should know better than anyone else.

Q. All right. Dr. Hastreiter, at page 7149 of Volume 79, on examination by Miss Forster, you were apparently asked as follows:

"Q. Well, other than the cases that





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"you have dealt with in your report  
have you had any experience interpret-  
ing digoxin levels in exhumed or  
embalmed tissue, Doctor?

A. You mean other than the cases  
in this ---

Q. Yes.

A. No.

Q. Are you aware of any literature  
on the subject?

A. I am aware of some very recent  
literature. I can't give you the  
reference offhand, but there are -  
there is some very recent literature  
of isolated incidences, but I don't  
think that there is a lot of experience  
in general with exhumed bodies and  
the concentration of digoxin."

Would you be good enough, Doctor, at  
a point in time, convenient to you, to provide us  
with those references?

A. Yes. I believe that Mr. Cimbura  
was the one who quoted these references to me, this  
is his field, really, but I would be glad to talk  
to him and get it through him if you like.





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Q. Would whatever you would be providing to us be coming from Mr. Cimbura in any event?

A. Yes.

Q. Then we can pursue it.

A. I would pursue it for you.

Q. We will do that, thank you, Dr. Hastreiter.

A. I wonder if I should mention with regard to your question about the classification of the cases that is listed on page 2 of the minutes of September, 1982.

Q. Yes.

A. I found out, thinking about it, and it was brought to my attention that the cases that were eventually classified as belonging in the "probable murder" category were only those cases that had toxicology available. Therefore, this again indicates that you cannot compare the clinical classification with this classification that incorporates toxicology, because by necessity it would require toxicology to categorize these cases as "probable murder" and my clinical classification did not take this toxicology into consideration.

Q. Right. Well my point was







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I.4 simply, Doctor, if you look at just for instance at page 2.

A. Yes.

Q. Of that minute.

A. Right.

Q. For instance, regarding Hines, right.

A. I am looking at page 2.

Q. Yes, under the heading "J. Hines".

A. Oh, yes, at the bottom.

Q. You report upon the clinical history and you indicate for instance:

"A good prospect of massive overdose."

Right?

A. Yes.

Q. And I suppose if we go to the next case, page 4, Kristin Inwood, the last sentence, the first paragraph:

"Dr. Hastreiter reported that, based on clinical findings, he put this death in his 'Good' category."

A. Right.

Q. And so looking at page 7, Stephanie Lombardo, the next case you deal with, the end of the first paragraph:





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"Dr. Hastreiter observed that on the basis of clinical information, digoxin overdose is a good possibility."

A. Yes.

Q. Then when you come to certain of the other cases, and I think this morning I dealt with the Shrum child, although you had placed that in "good" in your initial tabulation, when you came to report upon that child's clinical condition to the rest of the assembled group you reported it as "suspicious", right?

A. I believe that was the final vote, wasn't it?

Q. No, that is page 11, end of the first paragraph:

"Dr. Hastreiter has classified as suspicious."

A. Oh, Shrum?

Q. Yes, Shrum.

MR. LAMEK: No toxicology.

MR. ORTVED: Q. No toxicology, and that is the case that you did not categorize in your description of the clinical picture as "good", right?

A. That is correct.





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Q. Thank you.

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A. That really should be "fair"  
instead of "suspicious".

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Q. That is precisely my point.

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All right, thank you.

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THE COMMISSIONER: Yes, thank you,  
Mr. Ortved. Miss Jackman? Oh, yes, are you ---

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MR. SHINEHOFT: Yes, I have been  
asked to substitute.

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MS. JACKMAN: Mr. Commissioner,  
Mr. Olah had agreed to go ahead of me but he had to  
leave by 12:30, so Mr. Shinehoft is going now, then  
Mr. Olah and then me.

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THE COMMISSIONER: Yes, all right.

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MR. SHINEHOFT: If that is  
acceptable?

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THE COMMISSIONER: I take it anybody  
else down the line has no objection to this?

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MR. SHINEHOFT: I don't think so.

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THE COMMISSIONER: Yes, all right.

CROSS-EXAMINATION BY MR. SHINEHOFT:

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Q. Dr. Hastreiter, my name is  
Jack Shinehoft and I represent the parents of the  
baby Kevin Pacsai.

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Now, Doctor, in your previous evidence

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with regard to this child, at page 668---

THE COMMISSIONER: Volume?

MR. SHINEHOFT: I don't have the  
volume number.

THE COMMISSIONER: 6,000 what?

MR. SHINEHOFT: 6668.

THE COMMISSIONER: That will be 76.

MR. SHINEHOFT: Q. Do you have  
that before you?

A. No, I don't have the volume  
here before me.

THE COMMISSIONER: Do you not have  
Volume 76? I thought you did have that.

THE WITNESS: I don't believe so,  
I think they took it away, I had it yesterday.

MR. YOUNG: Does the Doctor have  
a copy?

THE COMMISSIONER: I have one but  
I thought I would hang on to that.

MR. YOUNG: I have an extra one.

THE COMMISSIONER: All right.

MR. YOUNG: What page, Mr. Shinehøft?

MR. SHINEHOFT: Page 6668.

THE WITNESS: 6688?

MR. SHINEHOFT: No, 6668.





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THE WITNESS: 6668, thank you.

MR. SHINEHOFT: Q. Have you found that, Doctor?

A. Yes.

Q. Approximately line 22, you indicate I believe:

"A. Well, the occurrence of paroximal tachycardia..." is not infrequent, do you recall giving that evidence?

A. Yes.

Q. Could you try and be a little more specific about this condition; how frequent or infrequent is it in your clinical experience, Doctor?

A. It is quite frequent. We see, I am sure at the Hospital for Sick Children they must see several cases every month of this condition in little babies.

Q. So you as a clinician have in your experience seen it on many, many occasions, would that be a fair statement?

A. Yes.

Q. And you go on further to indicate about the status of these children once they are treated. What do you say happens to these





1  
2 children if proper care and treatment is provided  
3 to them?

4 A. Well, that is exactly - excuse  
5 me, I am losing my microphone here. The condition  
6 has to be treated appropriately, if it isn't then  
7 the child can be very, very sick, and there have  
8 been situations where children have even died of  
9 this condition, but that is very unusual. Usually  
10 nowadays when a child is seen and treated appropriately  
11 it is then maintained on the medication, which is  
12 often digoxin, after six months to a year or so this  
13 will completely go away, this condition, and the  
child will be perfectly normal.

14 Q. Do you have any data, Doctor,  
15 or are you prepared to offer an opinion as to  
16 quantifying this? In other words, would it be fair  
17 to say 90 per cent of these children are perfectly  
18 normal if properly treated, or 95 per cent, or do  
19 you have any indications statistically of the  
20 percentage of children with proper treatment who  
21 would recover after six months to a year of some  
therapeutic medicine being administered to them?

22 A. I don't have the exact figure,  
23 but I would say around 90 per cent; there are  
24 essentially two types of paroxysmal tachycardia, the  
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3 one that occurs in little babies like this where  
4 they eventually recover from it. Then there is  
5 another type that may occur later on following the  
6 infancy period and may go on and on and on, that is  
7 a different type altogether, and adults have it  
8 sometimes too, it is quite frequent.

9 Q. It is your opinion, Doctor,  
10 that you can classify this baby as having the  
11 first type of tachycardia?

12 A. Oh, yes.

13 Q. So what you are saying, if I  
14 can paraphrase it, there would be a 90 per cent of  
15 great chance that with proper treatment that this  
16 baby would have been perfectly normal and healthy?

17 A. Right.

18 Q. You also indicated, Doctor,  
19 and I will give you the reference if you wish, this  
20 is at page 6672 of the same volume, that you saw  
21 no ready explanation for this child's arrest and  
22 death, is that a fair statement of what you said?

23 A. Where is this, what line, do  
24 you know?

25 Q. I believe line 18, I don't  
have the exact line.

THE COMMISSIONER: I don't think it







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is on that page.

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THE WITNESS: Oh, at the very

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bottom.

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THE COMMISSIONER: Oh yes, that's

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right.

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THE WITNESS: At the very bottom.

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THE COMMISSIONER: Yes.

9

"...saw no ready explanation for this  
child's arrest and death?"

10

MR. SHINEHOFT: Q. Now, I assume,

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Doctor, when you made that statement that you made

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it exclusive of the digoxin data and the digoxin

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possibility, is that correct?

14

A. Oh, yes.

15

Q. So you are making that statement

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from a clinical, and purely a clinical point of view,

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is that correct?

A. That is correct, yes.

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Q. But you did see information

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from the toxicology data that would lead you to the

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conclusions that you have made, is that also correct,

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Doctor?

A. Yes.

22

Q. I believe you indicated that

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you felt that digoxin overdose here was a very good

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2 probability, possibility, because of the unexpectedness  
3 of the situation, the terminal event, and the fact  
4 that the child had a normal structure, structurally  
5 normal heart, and the fact the high levels were  
6 found in his blood post mortem and pre-mortem, is  
7 that correct?

8 A. That is correct.

9 Q. And that is the basis upon  
10 which you came to the conclusion that you came to?

11 A. Yes.

12 Q. Doctor, further on, at page  
13 6678 at line 9, you discussed the levels in fixed  
14 tissue, and you indicate:

15 "...because the usual situation of a  
16 heart that has been kept in Klotz  
17 solution for three months is to have  
18 levels below 10 or in that range,  
19 whereas, here we have levels above  
20 100. But this is as far as I would  
21 go."

22 Is that what you said, Doctor?

23 A. Yes, that is what I said.  
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Q. Well, could you explain for me why you would not go further where you have fixed tissue levels ten times what you would expect to find?

A. Well, I believe that I had indicated that we have to be very careful and cautious about interpreting levels in fixed tissues and in embalmed tissues or exhumed tissues. The problem resides in the lack of experience plus the fact that there is a fair amount of variability when you fix a heart like this and you measure the concentration of digoxin. It will change from time to time, depending on the time that it has been fixed.

Now, I believe that after so many months the changes will be much less and in fact, the only real study I know to this effect is Mr. Cimbura's study where he himself performed it and he showed that after three months or so in the children who had been receiving therapeutic digoxin the levels were quite low and they were usually in the order of 10 or less. But I would be hesitant to, you know, go very far in making a decision upon the basis of information where a lot of real hard data is not available.

Q. No, but my question is, Doctor, is it the fact of the site of the sample or the fact







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3 that it is from a clot solution that leads you to  
4 the conclusion that that is as far as you go, or is  
5 it the number? For example, you said ten would be  
6 around average. Here he had 100. What if you had  
7 200 or 300; would that again alter your conclusion,  
8 Doctor?

9  
10 A. Well, the higher the number  
11 the more confidence it would give me.

12  
13 Q. What is the number that would  
14 give you confidence as to digoxin toxicity, I guess  
15 that is my question.

16  
17 A. I really don't know. That is  
18 a very difficult question to answer. I would say that  
19 100 is ten times what you would ordinarily find in  
20 a situation like this. So that would give me con-  
21 siderable confidence, except that I have not really  
22 seen a lot of data, I have only seen a relatively  
23 small number of specimens that have been placed in  
24 clot solution and examined, and I am not sure as to  
25 whether or not if larger numbers had been used the  
results would have been different. That is my  
concern.

Q. So your complaint, I take it,  
Doctor, is basically from the solution itself as  
opposed to the numbers that are rendered as a result of





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the analysis of the solution; is that a fair comment?

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A. That is correct. It is the lack of experience in this situation and the fact that we do not know what the variability would be if you placed different hearts in this solution, you know, how much variability in these levels there would be after a certain period of time.

Q. You would not expect, Doctor, to find a level of 100; is that fair to say?

A. I think that is fair to say, and to my knowledge this has not been shown to occur in children who had been receiving therapeutic digoxin. In fact, the levels were much lower.

Q. Thank you, Doctor.

You indicated at page 6684, line 6, you made some comments about the potassium levels of this child, and your evidence, I believe, is:

"A. My feeling would have been, and this is not unusual to find a high potassium in a child who receives a digoxin overdose."

Again, is that a fair restatement of what you said, Doctor?

A. Yes.

Q. Now, again, this may be a difficult





1  
2 question and not possible to answer, but can you  
3 quantify this: can you say that in the studies you  
4 have done that in 75% of the cases or 90% of the  
5 cases where you have an elevated digoxin you have  
6 an elevated potassium, or is it impossible to make  
7 that kind of prediction or that kind of number?

8 A. Well, I cannot give you an  
9 exact number, but I think there is a lot more knowledge  
10 about that than there was about the fixed tissue be-  
11 cause, as you know, when you administer digoxin it  
12 will poison the pump that keeps the potassium inside  
13 the cells. It is a little enzyme. When that is  
14 poisoned then the potassium will leak out of the cell  
15 into the blood and it is a matter of how much digoxin  
16 you give.

17 The more digoxin you give, the greater  
18 the likelihood that the high potassium will occur.  
19 So when children or adults receive a massive overdose  
20 of digoxin, the level of potassium in the blood in  
21 fact has been used to determine the prognosis. The  
22 higher the potassium the worse the prognosis, and  
23 the less likely these people will be to respond to  
24 treatment.

25 So I think that you could pretty safely --  
I could pretty safely state that a massive overdose will







1  
2 generally produce a high potassium concentration in  
3 blood.

4 Q. Would that correlation be  
5 100%?

6 A. No, it is not 100% because there  
7 may be other factors involved that are unpredictable.  
8 You know the potassium level in blood depends on many,  
9 many factors. It depends on the renal function, it  
10 depends on hormones such as aldosterone, adrenal-  
11 type hormones which we may end up discussing some  
12 time. It depends on the acid based status. It  
depends on a number of things.

13 Q. I see. But if those things are  
14 in balance, just making that assumption, would it  
15 be fair to say that given a massive dose of  
16 digoxin there is almost a certainty that the  
potassium level would rise in the blood?

17 A. I would say yes.

18 THE COMMISSIONER: The potassium  
19 level will rise anywhere, will it not, on death?

20 THE WITNESS: The potassium will  
21 rise after death, yes, but this is pre-mortem  
22 we are talking about.

23 THE COMMISSIONER: But if there is  
24 a massive overdose of digoxin, I suggest that the  
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2 consequences will be death, the consequences are death,  
3 then the probability is that the potassium level will  
4 rise in any event without any help from the ---

5 THE WITNESS: Yes, but before death  
6 in severely poisoned individuals, the potassium  
7 level will rise -- sometimes the person may recover  
8 and may not die and the potassium level will come  
9 down eventually.

10 But as I said earlier, the higher  
11 the potassium level, the better the chances are of  
12 this person to die.

13 THE COMMISSIONER: Well, the digoxin  
14 releases potassium from the cells; is that right?

15 THE WITNESS: Yes.

16 THE COMMISSIONER: Into the blood?

17 THE WITNESS: Right.

18 THE COMMISSIONER: Similarly, death  
19 releases potassium from the cells into the blood?

20 THE WITNESS: That is true. But I think  
21 he is talking about the pre-mortem situation, before  
22 death. After death this becomes very difficult, much  
23 more difficult to interpret.

24 MR. SHINEHOFT: My understanding, Doctor,  
25 is that potassium is measured in blood during life.  
You cannot measure potassium in tissue during life, is





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that correct?

A. Oh, you can measure it but I do not think it is used as a clinical tool. It does not mean too much.

THE COMMISSIONER: It is not easy to measure anyone's tissue during life, I would not think.

MR. SHINEHOFT: Q. That is right. So the levels that we are talking about, the ante-mortem levels are blood levels, serum levels, they are not tissue levels.

A. They are serum levels, not red blood cells but serum.

Q. Right. Now, you indicated again, Doctor, at page 6684 on line 17:

"I was told that the possibility was brought up that high potassium levels per se would produce a high digoxin level, or would raise the digoxin blood level, and in my opinion this is not true."

A. What page again, I am sorry?

Q. Page 6684, line 17.

A. Yes, okay. That is correct.

Q. You are aware, Doctor, that there





1  
2 are some clinicians who have come here who have put  
3 forth that proposition, that a high potassium per  
4 se can elevate the digoxin. Are you aware of any  
5 studies anywhere in the literature that would support  
6 that proposition?

7 A. No. I think it was proposed here  
8 as a hypothesis. It was never really proposed as a  
9 fact or a proven fact. I am not aware of any situation  
10 where the potassium in the blood is directly responsible  
11 for the elevated digoxin.

12 Now, there are situations where you  
13 have other factors, for instance, if you have renal  
14 failure, the kidney does not function properly,  
15 then both the potassium and the digoxin will rise  
16 together. So you have both rising together. But that  
17 does not mean that the potassium is responsible for  
18 the elevation of the digoxin.

19 The other factor I think which is  
20 important is that I would agree with everyone that  
21 states that digoxin and potassium compete for the  
22 same receptors. They interact; in other words, if  
23 you have low potassium in the blood and you give  
24 a certain amount of digoxin, there will be more effect  
25 of this digoxin on the tissue. If you have a high  
potassium level there will be less effect because the







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2 potassium is more or less blocking the effect of  
3 digoxin. But that is a functional effect. It is not  
4 an effect on the concentration of the drug in the  
5 blood.

6 Q. Now, I understand, Doctor, there  
7 is literature, though, that would indicate the opposite,  
8 in other words, that would show that an elevated  
9 digoxin level can cause an elevated potassium level;  
is that correct?

10 A. Oh, there is a very vast  
11 amount of this type of literature.

12 Q. Now, Doctor, you examined the  
13 baby's chart both when he was in Hamilton and when  
14 he was in Toronto; is that correct?

15 A. Yes.

16 Q. Dr. Kauffman has come here and  
17 he has given evidence, and I am going to refer you  
18 to his evidence and ask you about it. It is at  
19 volume 73. It is at page 6205. It would appear,  
20 Doctor, that this baby had an elevated potassium  
21 level of 7.4 at St. Joseph's Hospital and a  
22 potassium level of 7.7 at the Hospital for Sick  
23 Children, and Dr. Kauffman was asked about these  
24 two levels and whether the fact that one was  
25 compatible with digoxin intoxication and the other was





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not and how you reconciled the two, and he said  
at line 10:

"A. The conditions at the time  
the potassium was obtained on the two  
occasions were quite different. And  
I think this explains -- it affects  
the interpretation of the potassium  
concentration in the serum.

As I read the chart, when the  
baby arrived at St. Joseph's Hospital  
he was, as you said, almost dead. He  
was cyanotic. He had a heart rate in  
the neighborhood of 240. He was  
barely breathing. His temperature was  
sub-normal. His blood sugar was very  
low and they immediately drew blood  
gases -- his pH was 6.97 and among  
the other laboratory studies that were  
obtained he had electrolytes done  
and potassium was 7.4.

The chart suggests to me that  
these were all done within a fairly  
short period of time so that probably  
all that information represents the  
same condition of the infant at that





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moment.

So then therapy was started --  
well, let me stop there.

So there are at least three  
very good explanations for the high  
potassium at that point. One is that  
he was severely acidotic and it is  
well known that severe acidosis in-  
creases serum potassium, and I covered  
that previously.

He was hypoglycemic. That also  
is consistent with high potassium  
concentrations. And he was hypoxic.  
His oxygen saturation was 66<sup>5</sup> per cent.

So there are very good explana-  
tions at that moment in time for his  
high potassium."





K/BM/ak

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Q. Doctor, do you agree with what Dr. Kauffman said?

A. Yes, I do.

Q. And do you have anything to add as to his explanations as to the two elevated potassium levels at the two different places at two different times?

A. Excuse me just a second, let me just look at the laboratory data here for a second. I think there was also evidence of renal failure. We have at that same time a serum creatinine of 1.3 milligrams per cent which is high for little babies, about 3 times as high as it should have been.

Q. The BUN I believe was a little bit elevated, was it not?

A. The BUN here I have 6, which is acceptable, but I'm not sure this was taken at the same time. But the creatinine is a better index really of renal function. So, I think I would add an acute renal insult at this point as an additional reason but I agree completely with what he said.

Q. Would I be fair to say that the two situations were somewhat different, the one in Hamilton and the one in Toronto?

A. Oh, I think they were completely







1  
2 different.

3 Q. You see, Dr. Bain in his  
4 report, and perhaps you wish to see it, but I will  
5 just read you the one sentence he attributes to you.  
6 He said at page 27:

7 "In his testimony at the preliminary  
8 hearing Dr. Hastreiter stated that  
9 digoxin intoxication can also cause  
10 an elevated serum potassium. This  
11 would not account for the elevated  
12 levels in Hamilton."

13 Now, do you feel there is a reasonable  
14 explanation for this baby's elevated potassium levels  
15 in Hamilton?

16 A. Oh, I think the explanation  
17 is very good. In fact, I would be surprised that  
18 the baby who is so sick, shocky and has all these  
19 problems that this baby presented at Hamilton, would  
20 not have a high potassium. I would be surprised.

21 Q. I see. Doctor, you are amongst  
22 other things a pediatrician, are you not?

23 A. Yes.

24 Q. And is part of your expertise  
25 as a pediatrician that of the study of endocrinology?

A. Well, just as part of the





1  
2 general pediatrics functions that I exert, but I am  
3 not by any means an endocrinologist.

4 Q. You did discuss the question  
5 of adrenal insufficiency when you were giving  
6 evidence in regard to this baby, did you not, Doctor?  
7 Didn't you talk about some transient --

8 A. Yes, here.

9 Q. Here?

10 A. Yes.

11 Q. Have you ever heard of the  
12 condition of transient adrenal insufficiency?

13 A. Yes, I have heard.

14 Q. Have you ever seen it?

15 A. No.

16 Q. Now, you say, and I hope I am  
17 rephrasing your evidence, that you discount this  
18 possibility because the sodium level should have  
19 been reduced or should have been low and in fact  
20 it was not with regard to this child. Is that a  
21 fair comment?

22 A. I wonder if I could have the  
23 volume of my evidence.

24 THE COMMISSIONER: What volume is it?

25 MR. SHINEHOFT: I believe it is  
around 6687. It might be 6686, line 20.





1  
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3 THE COMMISSIONER: Let's start with  
4 the volume and the volume is 76.

5 MR. SHINEHOFT: The same volume,  
6 Volume 76 I believe.

7 THE COMMISSIONER: You think it is  
8 6,600-and-what?

9 MR. SHINEHOFT: 86, Mr. Commissioner,  
10 line 20.

11 THE WITNESS: Oh, I have Volume 76.  
12 6686?

13 MR. SHINEHOFT: Q. Yes.

14 I believe you indicate there, Doctor,  
15 that the sodium level does not support the conclusion  
16 that this child has some kind of adrenal insufficiency.

17 A. Well, maybe I should read you  
18 my exact words. I said:

19 "I believe that I would expect the  
20 sodium to be low, and I think the  
21 sodium level in my opinion does not  
22 corroborate this, plus the fact that  
23 at autopsy I believe the adrenals  
24 were described as normal."

25 Q. And are you aware of the  
pathological findings, of transient adrenal insuffi-  
ciency on post mortem?







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3 THE COMMISSIONER: I should have  
4 thought that there would be no pathological findings  
5 if it is transient. I may be wrong.

6 MR. SHINEHOFT: Well, my understanding,  
7 Mr. Commissioner, and we have discussed this before,  
8 transient means that it has come and gone but it  
9 doesn't necessarily mean that it hasn't left some-  
10 thing behind.

11 THE COMMISSIONER: Well, certainly  
12 Dr. Bain's proposition was that nothing was left  
13 behind because that's why he said that the adrenals  
14 were normal. But I think that is what he said, did  
15 he not?

16 MR. SHINEHOFT: Well, I put  
17 it to him, Mr. Commissioner, and I don't have  
18 exactly where it is.

19 THE COMMISSIONER: Well, I am just  
20 referring at the moment to his report. However, you  
21 ask your question, it is probably easier. What do  
22 you know about the pathology of transient adrenal  
23 insufficiency?

24 THE WITNESS: I would hesitate to  
25 say too much about it. My impression was that being  
transient that occasionally you may find normal  
histology. Of course, the diagnosis would be





1  
2 re-enforced if you had histologic findings but I am  
3 not really...

4 MR. SHINEHOFT: Q. Would you  
5 disagree with me, Doctor, if I were to tell you  
6 that there is some endocrinologists that feel that  
7 there would be an abnormality of the adrenal glands  
8 either as far as size or architecture is concerned  
9 and that the reported literature would indicate  
10 that almost all of the children who present with the  
11 clinical picture of adrenal insufficiency or a hypo-  
12 function and who die from that disorder will be found  
13 at post mortem examination to have some anatomical  
14 abnormality of the adrenal gland either in size or  
15 architecture.

16 A. I wouldn't disagree with you  
17 but I'm really not that qualified to answer this  
18 question.

19 MR. SHINEHOFT: Mr. Commissioner,  
20 I intend to move on to another area of my examination  
21 of Dr. Hastreiter and this might be an appropriate  
22 time to take lunch.

23 THE COMMISSIONER: All right. Well,  
24 until 2:30.

25 MR. YOUNG: Mr. Commissioner, before  
we do rise I wonder if I might get some indication





1  
2 as to whether or not we are going to see any further  
3 witnesses this week after the good Doctor is on his  
4 way back to Chicago?

5 I heard a rumor this morning that  
6 we may hear evidence from some nurses either this  
7 week or next week. I'm wondering if Mr. Lamek is in  
8 a position to clarify that if we will do so.

9 THE COMMISSIONER: Do you want to  
10 tell us?

11 MR. LAMEK: Yes, of course,  
12 Mr. Commissioner. To some extent that depends upon  
13 just when Dr. Hastreiter's evidence is completed  
14 because we have to have some time this week for the  
15 application for the stated case; not that I think  
16 that will take terribly long. If there is reasonable  
17 time this week to call another witness we propose  
18 to call Mrs. Carol Brown who formally had a name that  
19 I have difficulty pronouncing, I think it was  
20 Putherbough, who was the nursing specialist involved  
21 on Wards 4A and B. That will be the extent of  
22 evidence this week.

23 We have Dr. Kauffman back of course  
24 next Monday and it may be that if there is time we  
25 will call next week Mrs. Costello who was the head  
nurse on Wards 4A/B.





1

2

MR. YOUNG: Thank you, Mr. Commissioner.

3

MR. TOBIAS: Excuse me,

4

Mr. Commissioner, perhaps after lunch we could just  
5 canvass other counsel so that I can try and get an  
6 idea of when I am likely to be reached for cross-  
7 examination.

7

8

THE COMMISSIONER: I tried that  
last night and I may say I got some information that  
9 I'm glad wasn't on oath.

10

MR. TOBIAS: The problem that I  
11 have specifically is tomorrow morning at 10 o'clock.

12

THE COMMISSIONER: Okay.  
13 Mr. Shinehoft seems to be able to solve that problem.  
14 I would like to introduce you to Miss Jackman, she  
15 seems to be willing to stand down and let you go in  
16 ahead. You could try her anyway. If she doesn't  
17 let you in she is obviously showing favourites. So,  
maybe you can get on this afternoon.

18

MR. TOBIAS: That would depend I  
19 think on Mr. Olah as well who is liable to be less  
20 co-operative.

21

THE COMMISSIONER: Yes, but if he  
22 doesn't turn up he can't object. How long will you  
be, Mr. Shinehoft?

23

MR. SHINEHOFT: I would hope within

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a half an hour or so.

THE COMMISSIONER: Yes.

MR. SHINEHOFT: Mr. Olah has indicated to me that he had hoped to be back by 2:30, Mr. Commissioner.

THE COMMISSIONER: Yes. Well, there you are. We can see what we can do and you can work on anyone.

MR. TOBIAS: All right, thank you, sir.

THE COMMISSIONER: All right then until 2:30.

---Luncheon recess.





AA  
DM/PS

1  
2 ---Upon resuming at 2:30.  
3 THE COMMISSIONER: Yes, Mr. Shinehoft?  
4 MR. SHINEHOFT: Thank you, Mr.  
5 Commissioner.  
6 Q. Doctor, just before we broke  
7 for lunch, we were talking a little about transient  
8 adrenal insufficiency, and it is a condition that  
9 you said you have never seen but you have heard  
10 about and read about in literature?  
11 A. Yes. My understanding is  
12 that the literature is also very scant on this  
13 subject, and I read a little about it but not a  
14 lot.  
15 Q. If I told you that there was  
16 a computer search done at the MEDLARS.  
17 Have you heard of MEDLARS, Doctor?  
18 A. Yes.  
19 Q. And there was one article  
20 published in the 4,500,000 references, would that  
21 surprise you?  
22 A. No, I had heard about that,  
23 is this a French paper?  
24 Q. No, this is a Turkish paper.  
25 A. A Turkish paper.  
Q. I have it here if you want to take



2  
1  
2 a look at it, Doctor.

3 A. Do you have it translated?

4 Q. No, it is in English.

5 A. Oh, in English, that's good.

6 Q. Doctor, is it your understanding  
7 that this type of condition would normally kill a  
8 child, or do you have any comment about that?

9 A. In my understanding it would not  
10 kill the child and this is why it is called  
11 transient, in general.

12 Secondly, I would have some serious  
13 doubts about this about -- that this is an explanation  
14 for the baby because of the following reasons:

15 If you want to explain the first  
16 episode to be -- both episodes where the potassium  
17 was elevated to be explained on that basis. I think  
18 the second time around you have a high digoxin level  
19 and unless you say you accept the fact that the  
20 high potassium will also explain the high digoxin,  
21 which I don't, you don't have an explanation for  
22 the high digoxin level.

23 Q. So would it be fair to say what  
24 occurred in Hamilton did not occur in Toronto; is  
25 that your opinion?

26 A. Yes. If I could go back to











1  
2 Hamilton. In fact, I am quite certain that that  
3 episode was an episode of so-called paroxysmal  
4 tachycardia. I was looking at the chart again and  
5 at Dr. Malcolmson's evidence at the preliminary  
6 hearing, and I don't think there was much question  
7 from what I can see that this was a paroxysmal tachy-  
8 cardia. The only perhaps cloud in this issue is the  
9 fact that at one time the heart rate was recorded as  
10 being 160. The first, I think the first heart rate  
11 which was recorded in the physician's note. Let me  
12 just get to the chart, I think I have the chart here  
13 and I could give you a little bit of information.

14 Q. It is Exhibit 106.

15 A. Yes, 106. There is a note  
16 from the McMaster Hospital of Dr. Richards, and I  
17 think that is on page 37, 38, 39, and 40 of the  
18 chart, where Dr. Richards described the baby's  
19 status; and at the bottom of page 37 he indicates:

20 "Baby was seen at St. Joseph's  
21 emergency..."

22 Room, I imagine.

23 "...lethargic, tachypnic..."

24 I don't quite understand the other word.

25 "... hypothermic, mottled, etc.,  
no murmurs."





Then on the next page it says:

"Initial heart rate 160."

This is somewhat disturbing because the paroxysmal tachycardia in a little baby would usually be higher, would be higher than 180 and very often above 200.

However, the measurement of the heart rate is subject to error, quite frequently, and to me the most likely explanation is that this was an error of whoever measured, especially when the heart rate is very fast.

Shortly thereafter, three lines down you see the heart rate is already 200, and 240 and then it stays like that. Further down on Page 38, the 8th line from the bottom:

"No change in the heart rate  
240-250 with signs of paroxysmal atrial  
tachycardia on tracing."

So it was really documented by an electrocardiogram. This is very important. I don't believe we have the tracing here, but one can from the tracing pretty well establish whether or not it is paroxysmal tachycardia and this apparently was.

Well, this much for Dr. Richards' note. Then if I can refer you to -- I am not sure -- yes, Dr. Malcolmson's evidence at the preliminary hearing,





1

2

do you have that?

3

THE COMMISSIONER: No, I don't think so.

4

Do you have a copy, what volume is it?

5

THE WITNESS: It says here volume 2.

6

MR. YOUNG: I think I may have that,  
Mr. Commissioner.

7

THE COMMISSIONER: Yes, all right, and

8

it is from who, Dr. Malcolmson?

9

THE WITNESS: Dr. Malcolmson, yes.

10

THE COMMISSIONER: Thank you.

11

MR. YOUNG: You are welcome.

12

THE COMMISSIONER: What page, and I

13

would just take a note of the page and then I will  
give this volume to you, Mr. Shinehoft.

14

THE WITNESS: I don't remember, I have

15

lost my page, I think, I am sorry. Dr. Malcolmson had

16

stated in his evidence that this was paroxysmal

17

tachycardia and I don't think he even questioned

18

that, but I don't -- oh.

19

THE COMMISSIONER: At the bottom of

20

page 349?

21

THE WITNESS: Yes.

22

THE COMMISSIONER: Yes: "That

would be recognized as having..."

23

THE WITNESS: Page 39, at the bottom.

24

25







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And it says:

3

"No, sir, this child never received  
digoxin prior to that night.

4

Q. Prior to February 8th?

5

A. That is correct.

6

Q. Yes..

7

A. Had never been recognized as  
having atrial tachycardia, super-  
ventricular tachycardia."

8

9

10 Then he goes on to explain what atrial tachycardia  
11 is. Further down on page 350:

12

"What type did Keven Pacsai have?

13

A. Well, he was less than six  
months old, so he had the type -- well,  
14 it was obviously -- causing him a great  
15 deal of trouble, it put him into heart  
16 failure and it actually placed him in  
17 shock..."

18

And so forth, and he said:

19

"The potential of dying.

20

If he didn't have that reverted or  
21 as we would call it back to normal  
sinus rhythm..."

22

23 So I don't think there is any question at the time  
24 that he was convinced that it was atrial tachycardia.  
25

24

25





1

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The next page:

3

"What do you call that?

4

A. It is two names, your honour.

5

One is paroxysmal atrial tachycardia..."

6

Et cetera.

7

"Q. How do you spell it..."

8

And so forth, and that's it.

9

10

I don't think from this evidence again that there is much question that Dr. Malcolmson was quite convinced that this was atrial tachycardia, so that two physicians who assisted; Dr. Malcolmson wasn't there, he was at McMaster when the baby I think arrived later, but Dr. Richards saw the baby also at McMaster which was a few hours, two or three hours after his -- the onset of the problem and they felt quite confident that this was atrial tachycardia.

16

17

So if we had the electrocardiogram we could then really, you know, put an end to this argument as to what the cause of that problem was.

18

19

Q. Did you formulate, Doctor, an opinion as to the medical condition of this baby on his arrival at the Hospital for Sick Children in Toronto?

20

21

22

23

A. At that time the baby was quite stable. This was several days later, I think four days

24

25





1  
2 later on the 11th, if I am not mistaken. I can  
3 look it up here quick. Yes, and the baby was quite  
4 stable.

5 Q. And my understanding of his  
6 purpose in coming to Toronto was not for treatment  
7 but was for basically a workup, is that correct?

8 A. Was basically to -- work him  
9 up for the -- stabilize him and long term treatment and  
10 possibility of sick sinus syndrome here also, because  
11 he had fears whether the heart rate would slow down.

12 Q. Doctor, you were not here for  
13 the evidence of Dr. Kauffman and I am going to refer  
14 you to that evidence at volume 74, Doctor. Do you have  
15 that before you, it is at Page 6518.

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BB/BN/ak

At the bottom, Doctor, approximately  
line 22, do you have that before you?

A. Yes.

Q. There is a question:

"Q. Right. Just the fact that this  
child went back into sinus rhythm,  
is that unusual in a situation like  
this?"

To which Dr. Kauffman replied:

"A. I can answer it to the extent  
that is it consistent with some of  
the reports and the literature of  
what happens with the heart during  
digoxin toxicity and non-intoxication  
and I suspect that what is going on  
is that the digoxin had the electrical  
characteristics of the heart so  
derranged so that you have multiple  
sites in the heart initiating  
depolarization so that you have chang-  
ing blocks, changing rates and an  
extremely irritable heart, and it has  
been described in published cases  
occasionally that a part of this whole  
picture can include a brief time of





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"what appears to be a sinus rhythm followed then by some more severe arrhythmia. So, it doesn't particularly surprise me, and it certainly doesn't suggest to me in the face of everything else that it is not digoxin intoxication."

Would you agree with that scenario, Doctor?

A. Well, it is not quite clear to me what he is referring to, what time this is occurring.

Q. All right. If you will take a look further up on the page, you will note when the child was admitted to the emergency, the ICU, at approximately 6 o'clock in the morning.

A. This is on page ---

Q. 6518.

A. Yes.

Q. One of the doctors made a comment to the effect that this baby went back into regular sinus rhythm. I will get you the -- it is at page 69 of the chart, Doctor, if you would refer to that.

A. Okay.

Q. About two-thirds down. Do you





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see the reference where it says "CPR..."?

A. Two-thirds down?

Q. Approximately here.

A. "Chest x-ray", yes.

Q. Do you see where it says  
"ECG sinus rhythm"?

A. Yes.

Q. Now, this was apparently after  
his admission to the ICU, and the question was  
asked Dr. Kauffman does the fact that the child  
went back into sinus rhythm, is that compatible with  
an overdose of digoxin, and that was the answer that  
Dr. Kauffman gave to that question. I would like to  
know your opinion.

A. What is the date of this note,  
do you know?

Q. It is the 12th, I believe.

MR. OLAH: Right at the top of the  
page, Doctor, on the left hand margin.

THE WITNESS: Yes, but I cannot  
read it.

MR. OLAH: The 3rd of the 12th.

THE COMMISSIONER: It is the 12th  
of March.

THE WITNESS: The 12th of March?





1  
2 Oh, I see, when the baby was transferred to the ICU  
3 from the floor.

4 MR. SHINEHOFT: Q. That is right.

5 A. Okay. No, that is quite  
6 possible. I do not see any problem. The rhythms  
7 fluctuate sometimes quite a bit even with severe  
8 digoxin toxicity, and in fact, babies quite often  
9 with severe toxicity will tend to maintain sinus  
10 rhythm for a long period of time and usually what  
11 will happen is that the heart will slow down, so they  
12 develop sinus bradycardia. It is still the sinus  
pacemaker that is driving the heart.

13 Q. So that is not an infrequent  
14 phenomena, and has that been reported in the literature,  
15 to your knowledge, Doctor?

16 A. Oh yes, yes.

17 Q. Doctor, you have been given  
18 some papers, and I am going to refer just briefly  
19 to a couple of exhibits, one being Exhibit No. 276B,  
20 which is a paper by Phillips, and another exhibit,  
21 Exhibit 276D. Ms. McIntyre, I believe, referred  
22 you to those two papers. In Exhibit 276B there was  
23 a discussion of Case 5 and Case 11, and then 276D  
there was a discussion of Case 15.

24 A. If you would give me just a  
25







1  
2 minute to find it. Sorry, you are referring to the  
3 paper by whom now, Phillips?

4 Q. Yes, I am going to refer to  
5 the paper by Phillips, 276B I believe is the exhibit  
6 number, Doctor.

7 A. My papers are a little bit out  
8 of order here, sorry. Okay.

9 THE COMMISSIONER: What page,  
10 Mr. Shinehoft?

11 MR. SHINEHOFT: Q. It is referable  
12 to Case 5 and Case 11, Mr. Commissioner, and it is  
13 a very short question that I have. It would appear  
14 in those two cases there was a six hour time delay  
15 or a time interval between the giving of the drug  
16 and the onset of the terminal events, and then on  
17 the other exhibit there was a five and a half hour  
18 delay.

19 My question simply is this, Doctor:  
20 would Pacsai not fall within the parameters of the  
21 examples cited in those two articles, being this  
22 approximately six hour delay?

23 A. Yes, there are certainly cases  
24 in the literature where the interval was quite long.

25 Q. What I am asking you is would  
Pacsai be an example of one of these types of cases





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3 or is there another explanation as to the length of  
4 time from the onset of ---

5 THE COMMISSIONER: This is the  
6 deaths we are talking about, is it not? We are  
7 not talking about the onset of ---

8 MR. SHINEHOFT: Well, in Pacsai's  
9 case the death -- I believe there was some evidence  
10 that ---

11 THE COMMISSIONER: Well, I just  
12 did not know what your question was. I thought you  
13 were saying that the onset of the symptoms ---

14 MR. SHINEHOFT: Q. No, the death,  
15 and what I am asking you basically, Doctor, are  
16 the examples that have been given in these papers,  
17 are they analogous to the case of Kevin Pacsai in  
18 your opinion?

19 A. They are. I must confess  
20 my surprise, perhaps, to some degree as to the length  
21 of this time interval because in both cases the  
22 dose given was about 10 times the dose that should  
23 have been given, but they certainly appear to indicate  
24 that this is the situation.

25 Q. Doctor, you were involved,  
were you, with the case of Gary Murphy?

A. Yes.





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Q. Did you give evidence at his  
inquest?

4

A. Yes.

5

6

Q. Dr. Kauffman at Volume 74,  
page 6512, line 20 -- do you have that before you,  
Doctor?

7

8

A. Yes.

9

Q. When asked the question:

10

"Q. Can we compare the two..."

That is, Gary Murphy and Kevin Pacsai,

11

"...I guess is what I am saying.

12

A. I cannot put those two patients  
in the same category at all."

13

14

Then at page 6514 at line 19:

15

"Q. So it is really impossible to  
make that analysis or comparison  
would you agree?

16

17

A. I don't see them as comparable  
at all other than their post mortem  
digoxin concentrations."

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Do you agree with that, Doctor?

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A. Yes, basically I agree. I

22

do not know exactly what he is talking about here,  
in what sense he cannot compare them, but I can see  
that there are many differences between them.

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Q. Well, he says that ---

THE COMMISSIONER: Can I just suggest, though, that the best way to do this is to ask Dr. Hastreiter what his opinion is, then if it happens to be different from Dr. Kauffman's, then you can put it to him. But I do not think -- well, there is nothing improper about it, but it is not nearly as effective if you put to him somebody else's opinion and say to him, "Do you agree with that?" I would much rather hear what his opinion is without having been swayed in the first place by someone else's.

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MR. SHINEHOFT: O. Okay, if I could put it to you that way, Doctor. You have studied the Murphy baby, you have studied the Pacsai baby. Are there differences between the two and if there are what are they and do you consider them significant.

A. Yes, there are important differences. I believe the main differences are: (1) that Baby Pacsai had a structurally normal heart and a good circulation; Baby Murphy had a very severe one of the worst types of heart problems that one can imagine, really and had a very poor circulation. Secondly, Baby Pacsai had pre-mortem blood levels and Baby Murphy did not.

As you perhaps are aware, in my earlier phases of this deposition here and at the inquest I thought the best explanation for Baby Murphy was the fact that the baby had developed pre-renal failure and had accumulated digoxin in the blood.

Now, I could never use this same explanation for Baby Pacsai because Baby Pacsai simply had a good circulation and that could never be the situation. So, they are comparable in the sense that the post mortem blood levels were of similar magnitude.

Again, like in medicine, it happens so frequently, I should indicate my surprise and perhaps





1  
2 amazement as to the very high level that was  
3 found at post mortem because this is unusual, a  
4 level this high, but that is my best explanation.

5 Q. So, you find it difficult to  
6 compare the two, would you agree?

7 A. Yes, right.

8 Q. Finally, Doctor, I just want  
9 to refer you to a comment made by Dr. deSa in  
10 his report dated November 17th, 1982. It is  
11 Exhibit 283. Perhaps I could just read it to you.

12 THE COMMISSIONER: You are going to  
13 do it again.

14 MR. SHINEHOFT: This is the last thing.

15 THE COMMISSIONER: I know, but why  
16 couldn't you just ask him what his opinion is.  
17 Why do we have to have some other doctor's opinion  
18 put to him? He may not be a pathologist but he  
19 seems to be pretty well qualified. I would have  
20 thought he was entitled to give his own opinion  
21 without having another doctor's opinion put to him.

22 MR. SHINEHOFT: I agree, but I just  
23 wanted to...

24 THE COMMISSIONER: All right.

25 MR. SHINEHOFT: ... read this  
one sentence and then just to ask him if he agrees





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with it.

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THE COMMISSIONER: I tried; I tried;

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that's all I can say.

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MR. SHINEHOFT: One sentence, Mr.

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Commissioner.

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THE COMMISSIONER: Yes, all right.

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MR. SHINEHOFT: Q. He says:

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"However, under the circumstances with  
the coroner having ordered the heart

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to be removed --"

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MR. LAMEK: What page?

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THE COMMISSIONER: It doesn't matter,

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really.

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MR. SHINEHOFT: Page 15.

15

MR. LAMEK: If we are going to read it  
I think we should have the page.

16

MR. SHINEHOFT: Page 15.

17

MR. LAMEK: Thank you.

18

MR. SHINEHOFT:

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"O. This case is one in which

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there is no satisfactory anatomical  
explanation for the infant's death."

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THE COMMISSIONER: I'm sorry, but who

22

are we talking about? I guess we are talking about

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Kevin Pacsai?

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MR. SHINEHOFT: Yes, we are.

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THE COMMISSIONER: Right.

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MR. SHINEHOFT: Q. Would you agree with  
that, Doctor?

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A. Yes.

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MR. SHINEHOFT: I have no further  
questions, thank you very much, Mr. Commissioner.

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THE COMMISSIONER: All right, thank you.

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MR. SHINEHOFT: Thank you, Doctor.

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THE COMMISSIONER: Well, what happens  
now?

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MR. OLAH: I think it is my turn, Mr.  
Commissioner.

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THE COMMISSIONER: Mr. Tobias was look-  
ing for you but he seems to have left us anyway.

15

MR. OLAH: Well ---

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THE COMMISSIONER: He apparently is  
not available tomorrow but he is not here now so we  
won't worry about it any more.

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MR. OLAH: Fine.

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CROSS-EXAMINATION BY MR. OLAH:

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Q. Good morning, Doctor. My name  
is Olah and I act on behalf of a registered nursing  
assistant by the name of Janet Brownless who is still  
presently employed on the cardiac wards 4-A and 4-B.





1  
2 Doctor, throughout your cross-examination  
3 the last couple of days you kept coming back to a theme  
4 where you talked about a matter of probability. I  
5 guess in retrospect after having put all of the facts  
6 together that you have been able to assemble, all you  
7 can assist us is in essence to talk about probabilities  
8 of what happened to various children. Do I understand  
9 that? Is that really what we are talking about?

10 A. Yes.

11 Q. And I think you told Mr. Ortved  
12 this morning that the initial categories you outlined  
13 really were clinical diagnoses which were to really  
14 assist you and others as to whether further investiga-  
15 tive steps should be taken.

16 A. That's true.

17 Q. And that really in essence the  
18 final categorization that we should look at when you  
19 have put all the pieces together in this sad puzzle  
20 is the categorizations at the meeting of September  
21 13th, 1982.

22 A. That is true.

23 Q. And if I understand the  
24 categories that were outlined in that meeting, and  
25 they are defined at Page 28 of Exhibit 261, there were  
in essence four categories. Am I correct in that,





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Doctor: murder, probable murder, suspicious and natural?

A. Yes.

Q. And it is pretty clear what is meant by murder, but I was hoping you could assist us today, Doctor, in giving us some range of probabilities with respect to the other categories, if you can.

Now, before we get to that, as I read the minutes of the September 13th meeting the children that were listed in category 2 of probably murder were Hines, Inwood, Lombardo, Belanger and Onofre. Onofre should be found at page 12 and page 13 of Exhibit 261. You will see at the voting time in Onofre your vote is "probable murder. Comment: one which cannot be explained." Do you see that, Doctor?

A. Yes.

Q. I was wondering if you could assist all of us in terms of, I don't know whether you can, you can put some sort of range of probabilities on this category. How certain or how uncertain can we be in this categorization? Is there some sort of a range that you could indicate to us?







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A. Well, I think that is a little bit vague. I think if you asked me about each individual baby I can tell you, perhaps.

Q. All right, fair enough. In fact, as I understand your evidence when you were classifying the babies and giving them cardiac status reports, scales of 1 to 10, in effect what you were saying to everybody involved was that the probability of a child dying of the cardiac ailment is dependent on the number you assign them; for instance, in the case of Pacsai I think the number you assigned was 2. So, your probability of that child dying of his cardiac ailment would be 20%. Is that the way the scale works?

A. Yes, something, more or less.

Q. All right. Let's then go to the first child, Pacsai, if I may, Doctor. As you have indicated, the severity rating there was 2, normal heart, and your conclusion in the Pacsai case was that Pacsai very probably died of digoxin intoxication. Do I have that correct, Doctor?

A. That's right.

O. And that was based on a series of pieces or pieces of evidence, and I won't repeat them because you have covered them thoroughly. Before





1  
2 I go to really the questions directed to Pacsai that  
3 I am interested in, what kind of certitude or  
4 probability can we apply in your opinion to the child  
5 having died of digoxin intoxication?

6 A. I think the probability is  
7 always somewhat relative, but I think if you take  
8 the numbers that I have given, I had given to the baby  
9 from a clinical standpoint alone, for instance, if I  
10 give him a rating of two that means he would have  
11 20% probability of dying of natural death and 80%  
12 probability unexplained. But that, of course, was  
13 not the final, the final decision was arrived at  
14 at the meeting in September and I think according  
15 to the rating that he received then we will have to  
16 say that the probability is high. Now, how high, that  
17 is very difficult to say.

18 THE COMMISSIONER: We are not really  
19 engaged in a mathematical exercise.

20 THE WITNESS: Yes.

21 THE COMMISSIONER: It is a medical  
22 opinion and he has given us his opinion. I don't  
23 think it is really fair to ask him whether his opinion  
24 is 60/40 or 70/30 or 80/20.

25 THE WITNESS: Yes, it is very difficult.

THE COMMISSIONER: His opinion is that





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the child died of digoxin intoxication for the  
reasons that he has given.

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MR. OLAH: Fair enough. I thought, Mr.  
Commissioner, it might be of assistance to you and of  
course if you don't feel it is, then I will  
leave it at that.

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THE COMMISSIONER: I don't think we  
can ask the doctor really, maybe to -- well, maybe  
you can, if you can do it, try it, but I would  
be very surprised, I would be very surprised indeed.

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MR. OLAH: I guess what I am trying to  
find out is what kind of certitude lies behind that  
phrase, "very probable," and I am just trying to get  
some sort of a content to that phrase, but if you  
don't think that assists you, then I will move on.

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THE COMMISSIONER: Well, if I thought that  
the doctor could do it and if I thought that his having  
done it, really, I would be able to put much faith  
in it. Now, I don't mean that I don't pay the  
greatest amount of attention to his opinion on how  
the child died, but I really don't think he's  
qualified, that is, medicine is not qualified to say  
whether that was a 79% chance or a 53% chance. He  
may be able to say whether it is probable or very  
probable or possible, but that is speaking English, that





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is not speaking mathematics.

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MR. OLAH: Well, I leave it at that,  
if you feel that that doesn't assist you, Mr.  
Commissioner.

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THE COMMISSIONER: Well, I really think  
that is all he wants to do, but if I am saying some-  
thing that you don't agree with, Doctor, just correct  
me.

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THE WITNESS: All I can say is it is  
a very high level of probability.

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MR. OLAH: Fair enough.

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Q. Doctor, the real points I wanted  
to make with respect to this child relates to my  
client and I would like to get at it this way.  
As I understand, the first observation of toxicity or  
observations which may be linked to toxicity occurred  
at 4:00 in the morning and any time that Mr. Hunt  
or anyone wishes transcript references I will be  
delighted to provide them. That was your evidence  
when you were examined by Mr. Lamek. I think you also  
said that you felt that the most probable  
scenario or mode of administration in this case  
was the IV method and that in your view administration  
had to occur somewhere between 3:30 and 3:55 a.m.  
You talked about oral administration, continuous







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infusion, and what I am trying to get at, Doctor, is this. Assuming either intravenous administration or oral administration, what is the maximum time that one can take back the administration of digoxin to this child in terms of probability, Doctor? What is the earliest time, assuming digoxin was administered to this child, that digoxin in a lethal dose could have been administered to this child, Pacsai?

THE COMMISSIONER: I thought we had all of that, did we not? Did we not have all of that?

MR. OLAH: I'm sorry?

THE COMMISSIONER: Do we not have all of that?

MR. OLAH: I don't think we have an outside time limit, Mr. Commissioner.

THE COMMISSIONER: Oh, is that what you want?

MR. OLAH: And that is what I really want.

THE COMMISSIONER: Well, I thought we had that.

MR. OLAH: Not from this witness. We have had it from a previous toxicologist, but I don't believe that the outside window, the time window has been defined through this witness.





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THE COMMISSIONER: Are we talking about  
Pacsai now, are we?

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MR. OLAH: That is correct, sir.

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THE WITNESS: I thought when I was  
questioned by Mr. Lamek we discussed that.

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MR. OLAH: We had when the first  
effects of oral administration would be found and  
then the doctor talked about why he thought it was  
not continuous infusion, but as to the maximum outside  
time limit for administration I don't think that  
was ever pinned down. I may be in error, maybe Mr.  
Lamek can assist us in that regard.

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MR. LAMEK: I don't have any recollec-  
tion on that.

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THE COMMISSIONER: Most probable  
scenario I have; that's not my words, that is some-  
body else's. IV dose at about 3:30, but not typical  
to survive so long, maybe smaller dose than with  
others. Maybe he didn't in this one. But perhaps it  
is in his report at any rate, is it not.





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I don't want to - if you are reasonably sure that he didn't --

MR. OLAH: I have reviewed the transcript Mr. Commissioner.

THE COMMISSIONER: He did not give it, did he not give it in the course of his report somewhere?

MR. OLAH: I don't believe that the maximum outside time limit could be found in this report.

THE COMMISSIONER: All right, can you give that to us Doctor?

THE WITNESS: Okay, I will be glad to try. We have to make certain assumptions; one would be that this was the onset of the symptoms at four o'clock, okay, and then if we --

THE COMMISSIONER: Wait a minute here, I think - I have got 0330 to 0400, however you - "most probable start of IV dose about 3:30". However, I guess maybe you didn't, but if you can give-I think Mr. Olah wants to know the earliest time at which you can conceive of the dose being administered.

MR. OLAH: Q. Either intravenous or orally Doctor, the lethal dose?

A. But I would have to know the time







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of the onset of the problem, which I believe was at four o'clock.

Q. Yes, it was, that was your earlier testimony Doctor. In fact the Commissioner brought that to your attention that it seemed to occur at four o'clock.

A. Four o'clock. If one assumed that this is the onset of the symptoms, then if an IV bolus were given it would have to be given anywhere from five minutes to 30 minutes before the onset of symptoms, that would bring us back to about 3:30, or five minutes to four, this is the most likely time that it would have been given.

Q. I think you said that the oral administration, the first effect would have been seen anywhere from 2 hours to 30 minutes before the onset of the first symptoms?

A. Yes, I have not got to the oral yet, I am just talking about the intravenous.

Q. So what is the earliest possible time, given an IV dose, that you believe that a lethal dose could have been given to this child?

A. For the intravenous the earliest would be 3:30 very likely.

Q. Let's then go to the oral mode of





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administration. Did I understand your evidence correctly that the very earliest possible time for administration of a lethal dose would have been two hours before the onset of the symptoms?

A. That is correct, could have been at two o'clock.

Q. So positing any mode of administration, whether it be IV, oral, continuous infusion, in your opinion could that lethal dose have been administered prior to two o'clock, or would it have been some time after two o'clock?

A. I would feel quite confident in saying that it would have been after two o'clock.

Q. All right.

A. The only exception would have been a very slow infusion, or a very slow administration through a nasal gastric tube which I don't believe the child had in place, or something of that sort, which could conceivably have started earlier, but it still would have to be administered until after two o'clock.

Q. I believe the evidence is that this child did not have a nasal gastric tube; so then you talked about a slow, what was it a slow --

A. Intravenous infusion.





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Q. And when is the earliest time that you say that could have occurred?

A. Well that depends on the rate and the concentration of the digoxin in the solution. So you could make it longer or shorter according to the concentration of the solution.

Q. If it were a longer period of time I take it would have to be a smaller dose?

A. Right.

Q. Assuming that kind of a scenario, what is the earliest time for administration that you envisage, Doctor?

A. I still would say that it should have been around two o'clock, it would be very unlikely that it would have been before that.

Q. So if my client were off shift at 7:30 the evening previously, can we be fairly confident, Doctor, that she could have had no direct involvement in the death of this child?

A. Yes.

Q. Thank you. Similarly, Doctor, I don't want to have to take you through the lengthy exercise with respect to the child Inwood, but your evidence as I understand it was that - was similar in terms of timing. In the Inwood case arrest occurred





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at 2:30 in the morning at 3 o'clock in the morning,  
and using the same kind of time parameters would it  
be fair to say that the maximum outside time for the  
administration of that dose would have been some time  
in the range of 12:30 in the morning?

A. I have a note here saying that  
something started at 2 o'clock; the arrest, the  
actual arrest was at 2:30 but there were some, there  
was some change at 2 o'clock I believe, and if that  
was the case then we would have to start from there.

Q. All right. So starting from 2  
o'clock we take you back.

A. Two hours.

Q. Two hours, so we are talking  
about a maximum outside time limit of midnight or so?

A. Yes.

Q. And again similarly, if my client  
were off that evening at 7:30, that is the evening  
previously, she could not have had no direct involve-  
ment in the death of that child?

A. That is right.

Q. Now, Doctor, there was one thing  
that puzzled me about the discussion relating to the  
Inwood child on September 13th, and perhaps you could  
clarify that for me; have you got a copy of Exhibit







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261 there?

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A. Yes.

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A. Where is this?

Q. If you would have a look at the second paragraph, that is the first full paragraph on page 6.

A. Oh yes.

Q. Line 3:

"Dr. Hastreiter asked Sergeant Warr questions about the serum."

I was wondering if you could tell me what a cannula is first of all?

A. A cannula would be a little tube that you insert inside the vein, it could be a needle actually. The reason I was concerned about it is because we were very concerned about the possibility of contamination since the level measured in Inwood's blood had been so high. We were also concerned about the possibility that if she had a cannula or a needle





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in place there and digoxin had been injected through there, and then the sampling through the same needle, the same cannula, it would have been contaminated. So we had to be very careful to try and rule that out. But then I was advised that there was no cannula by Sergeant Warr, and this of course helped the situation as far as making the sample more reliable.

Q. Thank you very much Doctor. I would like to then turn for a moment if we could to the child Hines, Baby Hines. As I understand it you assigned a severity rating of 3 to Hines?

A. Yes.

Q. What puzzled me about that was both Pacsai and Hines had normal hearts; Pacsai you assigned a rating of 2, and Hines a rating of 3, and I was just curious why you felt that Hines was a more serious case than Pacsai was?

A. Well, the rating took into consideration not just the lesion of the heart itself but also the cardiocirculatory status and the complete clinical status of the baby. So I thought that Baby Hines was a little worse off than Pacsai because of the arrhythmias and the general clinical condition. Baby Hines had, if you remember, has been described as having those episodes of bradycardia, was described





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as lethargic, limp and so forth, sepsis was suspected. In other words there was a potential I thought for - a higher potential for his death than in Pacsai's case, although the difference is not that much 2 to 3, but there is a small difference.

Q. Now I think at the meeting of September 30th it was concluded, or certainly you concluded that Hines was probably "murder". What I would like to do, as we have done with the Inwood and Pacsai case, is to have you look, take you to the terminal episode and try to establish an outside time parameter for the administration, if in fact there was a lethal dose administered, the outside time parameter for its administration. Have you got the medical chart of Jordan Hines there Doctor, it is Exhibit 103?

A. I don't believe so. Thank you very much.

Q. If I can ask you to turn to page 68 Doctor, I see that under the "cardiac status" it says:

"Apex taken ..."

What is it: "every hour"?

A. Every hour, yes.

Q. And apex range from 124 to 160







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and regular?

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A. Yes.

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Q. There is an indication at 4

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o'clock the apex went up to 182, but was regular?

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A. Yes.

7

Q. And then it talks about feeding

well on the line below?

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A. Yes.

9

Q. And just above the third last

10

line it says:

11

"Slept between feedings with no

12

distress."

13

A. Yes.

14

Q. "4 o'clock no noted distress."

And then there is an arrest at 4:10?

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A. Yes.

16

Q. Would it be fair to assume then,

17

perhaps at 4:10 as the first indication of toxicity

18

in the case of this child?

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A. Yes, that appears to be the case.

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Q. So that if we were to take back,

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go back two hours from 4:10 then the last possible

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time that a lethal dose of digoxin could have been

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administered to that child would have been at 2:10

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in the morning?

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A. That is correct.

Q. And again going through the same exercise, bearing in mind that my client left that evening earlier, the evening previous at 7:30, I assume we can be fairly confident in saying she could have had no direct involvement in the death of that child?

A. Right.

Q. I would like then briefly to go through the same exercise with the Lombardo child, Doctor.

- - - -





EE/BN/ak

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With Lombardo I was not clear, was this child embalmed,  
do you know?

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A. I am not sure now.

5

THE COMMISSIONER: Was this child what  
did you say?

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MR. OLAH: Embalmed.

8

MR. SHANAHAN: I can give the  
answer but I cannot give you the chapter and verse,  
and the answer is she was not embalmed.

9

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MR. OLAH: Q. The question I have,  
Doctor, is if a child is embalmed, is there going to  
be less dehydration occurring after death, that is?

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12

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A. Less dehydration?

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Q. Yes.

15

A. No, I do not think that there  
is any evidence of that, at least not to my knowledge.

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Q. You will recall that in this  
case there was some chest fluid taken, and I was  
wondering whether the presence of chest fluid, and  
I assume the chest fluid was taken subsequent to death,  
whether that would indicate to you or assist you at  
all in terms of whether there was extensive dehydra-  
tion or not?

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A. How long after death was it,  
do you know?

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Q. If you will give me one moment, Doctor, I might be able to help you. Well, have you got Exhibit 95C there? That is the report dated March the 25th, 1982, Doctor.

A. I am not sure I have it. One moment.

Q. We are dealing with, for your convenience, Mr. Commissioner, Sample T-52. Page 2, Doctor, T-52, which seems to have been taken at the same time as the other samples when the body was exhumed.

A. Yes.

Q. Which was, I believe, 16 months after death, but I am just wondering whether the presence of chest fluid would assist you to any extent in determining whether there was extensive dehydration in that child or not?

A. Well, as long as there is fluid present, the degree of dehydration must be somewhat limited. My understanding is it depends on several factors. I do not know a lot about embalmed bodies or exhumed bodies, but it depends on the quality of the coffin and the type of coffin, whether it is air-tight, water-tight; it depends on the environment and the time of year. Of course, this child had







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been buried already for 16 months, so that is a long period of time. But it depends on a number of factors. I am surprised that there was still fluid in the chest cavity.

Q. Well, would that give you more confidence in the readings relating to the other tissue, the fact that in fact there was still fluid found in this child?

A. It would give me -- see, the best clue, I think I indicated it earlier, would have been to have the weight of the body. Then we really would have -- and it is much better to speak when one has more definite information than just that there was fluid present.

But I would say in general, yes. Of course, the chest fluid, we do not know what it was. We do not know whether it had been contaminated by, you know, gastric contents and things of that sort. We have to be a little bit careful with this type of fluid which is not very specific.

MR. OLAH: Okay. Would this be an appropriate time to break, Mr. Commissioner?

THE COMMISSIONER: Yes, 15 minutes. Do you know how much longer you will be, Mr. Olah?

MR. OLAH: I will be about another





EE4

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20 minutes, sir.

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THE COMMISSIONER: All right.

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---Short recess.

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---Upon resuming.

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THE COMMISSIONER: Yes, Mr. Olah.

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MR. OLAH: Thank you.

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Q. Doctor, I wanted to next direct

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you back to Exhibit 95C and Samples T-60 and T-61,

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respectively. They are samples of contents isolated

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from the stomach which had a total digoxin of 629

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nanograms, this is the Lombardo child; T-61, the

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small bowel, 289 nanograms of digoxin found in

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contents isolated from small bowel. I think

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Mr. Lamek asked you with respect to the child Cook

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whether readings of this kind, and I am interested

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in the Lombardo child, whether these readings assist

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you at all as to whether this child received, on

19

oral administration, a toxic oral administration of

digoxin or not?

A. Excuse me just a second.

20

THE COMMISSIONER: What page is that?

21

MR. OLAH: That is page 2 and page 3

22

of Exhibit 95C, Mr. Commissioner. It is the very

23

bottom of page 2.

24

MS. CECCHETTO: Perhaps you could

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EE5

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give me the date. I do not believe the Doctor's  
copy is numbered.

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MR. OLAH: Q. The report is  
dated March 25th, 1982, Doctor.

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A. Yes. Okay. The finding of  
digoxin in the bowel does not surprise me, and I  
do not think it helps in any way to determine whether  
the medication was given by mouth or intravenously  
or other routes. This baby was not supposed to have  
received any, is that right?

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Q. That is correct, Doctor.

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A. The finding of digoxin in the  
stomach is a little more surprising perhaps because  
the amount here is considerably higher than it was  
in Cook's case. In Baby Cook it was only 34 nanograms  
in the stomach and here we have 629.

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So I think there are two possibilities.  
One is that assuming that the drug was not given by  
mouth, that the drug was excreted into the bowel to  
the vial, and then may have reflexed back into the  
stomach, that is a possibility. I am not sure it is  
a very likely possibility with the amount that they  
have in the stomach, which appears to be a fairly  
large amount.

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So, I was trying to calculate -- let







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us say if this child had received just one maintenance dose of digoxin for her weight, and assuming that she is getting, let us say, 10 micrograms per kilo per dose, which is a pretty big dose, she would have received -- she weighs only  $2\frac{1}{2}$  kilos, so it would be 25 micrograms, which would be 25,000 nanograms. Of these 25,000, you find 600 in the stomach. That is approximately, I would say, 1/40th of the total amount given by mouth.

So, in summary, I would say it does not help completely separate one or the other route. It probably makes the oral route, the probability of oral administration fairly high. That is as far as I can go, I think.

Q. Doctor, have you got the medical records of Stephanie Lombardo there? It is Exhibit 78.

A. I do not have the medical records, no.

Q. I would ask you to turn to page 41 of the chart, if you could, Doctor.

A. Yes.

Q. As in the earlier cases, I would like to assume a toxic level being administered to this child, and I would like to first of all





1  
2  
3 pin down when that administration mostly likely would  
4 have occurred. If you would look at the entry at  
5 the bottom of the page, which covers the time period,  
6 it looks like 1900 hours to 0300 hours, patient  
7 relatively stable, patient feeding eagerly, apex  
8 144 to 152 and regular, respiration, I cannot read  
9 my photocopy but it seems to be 150 to 50; is that  
what you ---

10 A. Yes, I cannot read it either.  
11 150 would be quite high, but ---

12 Q. Shallow but in no distress,  
13 colour pink in room air, dusky when upset. Became  
14 restless after second feed, however settled well.

15 Then at 3:30 baby became restless,  
16 breathing very shallow, apex irregular and bradycardiac.  
17 Placed on cardiac monitor. Then on the following  
page there is a small amount vomited.

18 A. Yes, in the previous note  
19 from the medical resident on top, it indicates that  
20 he was called at 3:30 because of irregular apex,  
21 bradycardia. So it looks as though the problem  
started at that time, 3:30.

22 Q. Assuming again, or going back  
23 and trying to determine what the maximum time back  
24 for a lethal dose of digoxin administration would be,  
25





1  
2 bearing in mind your earlier comment that this may  
3 have been well oral administration, are we then  
4 taken back again two hours to about 1:30 in the  
5 morning, Doctor?

6 A. Yes.

7 Q. I would like to then deal  
8 very briefly with the Belanger baby, Doctor. If I  
9 could ask that you have Exhibit 79, which is the  
10 medical records of Jesse Belanger produced.

11 Unfortunately, as in Lombardo, in  
12 this case we do not have stomach and bowel contents  
13 so we cannot talk about possible mode of administration,  
14 but if I could ask you to turn to page 64 of the  
15 chart, at the top of the page you will see the  
16 notations for the time period 1300 hours to 1900  
17 hours. And you will see stable during the afternoon,  
18 apex 134 to 170 and regular, colour remained pink.  
19 At 1830 apex noted to be regular, colour somewhat  
20 dusky, respirations up to 80 and very shallow, colour  
21 extremely poor, and at that point the doctors are  
22 notified.

23 I am sorry, Mr. Commissioner, I did  
24 not realize you did not have the chart in front of you.

25 THE COMMISSIONER: No, we thought we  
had lost it, but we did not. What page are we on now?





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MR. OLAH: It was page 64, sir.

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Q. You will see about a third of  
the way down, Doctor, that at 1930 a cardiac arrest  
is called.

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A. Yes.

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Q. Would it be fair to say that  
1830 would be the first time possible signs of  
digoxin toxicity are noted in this child?

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A. Yes, it appears that way.

Q. So, again, the maximum time back for the administration of digoxin in this case would have been 4:30 in the afternoon?

A. Yes.

Q. I would like to then briefly deal with the last child in this category and that is John Onofre. I understand, Doctor, that you assigned this child a severity rating of 5.

A. Excuse me just a second. All right, yes.

Q. And from a review of the minutes of the meeting of September 13th, and you will recall that you and I at the outset reviewed the vote, as we have come to call it, with respect to this child and your vote at Page 13 was probably murder.

A. That's right.

Q. So, is it your opinion today, Doctor, that the probability of this child dying of digoxin toxicity is about the same level as the children we have already discussed, namely, Lombardo, Hines, Inwood and Belanger?

A. Well, I really have little difficulty remembering all the categories in which these children were in. So, I think that if that's what





1  
2 I said, I would still stick with that opinion, but I don't  
3 remember the exact categories of each one of the  
4 children.

5 Q. Now, on the top of Page 13 -  
6 have you got the exhibit there?

7 A. Yes.

8 Q. Mr. Cimbura is reported as  
9 having no toxicology report. Do you see that,  
10 Doctor?

11 A. Yes.

12 Q. In fact, as I understand it,  
13 there is toxicology information with respect to this  
14 child. If I could ask you to turn to Exhibit 95-F,  
15 which is the report dated December 31, 1982. I  
16 would like to spend a moment just reviewing the results  
17 of the toxicology report with you.

18 A. What page was this again?

19 Q. It is Exhibit 95-F.

20 THE COMMISSIONER: And it is  
21 December 31st, 1982. You realize, of course, that  
22 this was after the meeting of September 13th.

23 MR. OLAH: Yes, sir.

24 THE WITNESS: Okay, yes.

25 MR. OLAH: Now, Doctor, this informa-  
tion wasn't available at the time of the meeting.





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I assume you have seen the results of the test done  
to the tissues described in this report before?

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A. Yes.

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Q. And I was just wondering  
whether those results assist you at all or confirm  
your views of September 13th, 1982.

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A. Excuse me just a second.

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What was your question again, I'm  
sorry.

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Q. Well, the question I had was  
whether the results reported in this report corroborate  
or assist you in any way with respect to the opinion  
you rendered on September 13th, 1982, and perhaps you  
should know, Doctor, that this child was digitalized  
on November 23rd, 1980, digoxin was discontinued on  
December 5th, 1980 and the child died in the early  
hours of December 9th, 1980.

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A. Yes. With all reservations to  
the fact that we cannot quantify, or we cannot  
place a great deal of reliability on quantification  
of digoxin in exhumed tissues. I still feel that  
these levels are certainly on the high side for both  
liver and skeletal muscle. The child had been off,  
as you have just indicated, off the medication for  
about four days prior to death and if you assumed that





1  
2 the half time of elimination of the drug from  
3 the tissues is the same as in the blood, which it  
4 is approximately from the myocardium, although  
5 we are not dealing here with myocardium, and I am  
6 not sure I know the half lives, I think they are  
7 fairly close, of the solid tissues, liver, muscle  
and so forth.

8 Then in four days you are talking  
9 about two half times. So, you would expect the  
10 level in the tissue to be maybe one-fourth of what  
11 it had originally been for a therapeutic dose,  
12 a therapeutic regime of the drug. Here you have  
13 concentrations which are on the high side.  
14 However, it is still not easy to interpret because  
15 of the problem of dehydration, things of that  
16 sort, exhumation tissue is not a clear cut situation.

17 Therefore, I say that toxicological  
18 findings are certainly, do not speak against what  
19 we had said before. I don't think they are of great  
20 help in this case, but they perhaps point in the  
same direction as the clinical facts.

21 Q. All right. But I then ask you  
22 to go to the chart of this child, which is Exhibit 70.  
23 In particular, I would like to turn you to page 62,  
24 which seems to be the entry of one of the doctors at  
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the arrest. If I can point you to the blood gases, and they are taken around 3:50 in the morning. Do I see that there is a potassium level of 6.1 reported at that time?

A. Yes, it looks like it.

Q. Now, I think we have had evidence previously that potassium levels in excess of 5 or 5.5 are high, are considered high.

A. Yes.

Q. Am I correct in that, Doctor?

A. Yes.

Q. Do you attach any significance to that?

A. I would say 5.5.

Q. Do you attach any significance to the finding of a potassium level of 6.1 during the arrest procedures in the case of this child?

A. I think I would like to know whether this blood was drawn early or late because if the child had arrested and had remained arrested for some time being resuscitated, the blood was drawn let's say half an hour later, I would be less surprised than if the blood had been drawn very early during the time of the arrest.

THE COMMISSIONER: The arrest is





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3:29 and the blood was taken at 3:30, isn't that  
what it is?

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THE WITNESS: I think that's  
correct.

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MR. OLAH: Yes, that is correct.

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THE WITNESS: So, if that is the  
case ---

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THE COMMISSIONER: It is 20 minutes,  
21 minutes and it was 4:10 they gave up.

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THE WITNESS: Yes. I think one  
would have to be a little careful in interpreting  
this because 20 minutes into the time of the arrest,  
if there was very little circulation I wouldn't be  
surprised if the potassium had risen. I notice  
that we have several other potassium determinations  
here. On December 7th, that was two days earlier,  
the potassium was sort of borderline high, 5.6.

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MR. OLAH: Q. Now, in this case,  
Doctor, if I ask you to turn to page 64. There is  
an entry there commencing at 3:10 and cardiac monitor  
shows irregular rhythm with long pauses between beats.  
When listened to with stethoscope the same was  
heard, bradycardic.

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A. Page 54 you say?

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Q. 64, Doctor.

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A. Oh, 64, I'm sorry.

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Q. I'm sorry.

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A. Yes, fine.

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Q. When baby woke up by nurse heart rate 100, notified regular nurse who stayed with baby. Baby then arrested at 3:19. Now, there seems to be some discrepancy about when the arrest occurs, whether it was 3:19 or 3:29, but would it be fair to say that the first possible symptoms, if there was digoxin toxicity here, would have occurred at 3:10 in the morning?

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A. At what time?

13

Q. At 3:10 in the morning?

14

A. Yes, I think I would agree

15

with that.

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Q. So, again, going back to

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our window for possible lethal administration, the

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earliest point in time in which a lethal dose of

19

digoxin could have been administered to this child

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would have been some time after 1:10 in the morning.

21

A. Right.

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Q. And again bearing in mind

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my client was absent from 7:30, from the evening

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previously, she could have had no direct involvement

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with the death of this child.





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3 A. That's right.

4 Q. Just a couple of more children  
5 that I would like to cover with you very quickly.

6 I would like to go to the child  
7 Laura Woodcock, Doctor. Have you had a chance to  
8 see Dr. deSa's report on Laura Woodcock?

9 A. No, I didn't.

10 Q. Perhaps if I could take a  
11 moment and have you review it and see if it assists  
12 you at all. That is at the page commencing at page  
13 15, Mr. Commissioner, of the report.

14 THE COMMISSIONER: Where did you  
15 find that, what page?

16 MR. OLAH: Commencing at page 15,  
17 Mr. Commissioner.

18 THE WITNESS: I don't have the  
19 report. Dr. deSa's report? Could you read it?  
20 Do you have another copy? Thank you, I have one,  
21 thank you very much.

22 MR. OLAH: Q. In particular I  
23 would like you to focus on the last paragraph on  
24 page 16, Doctor.

25 A. All right.

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Q. This pathologist seems to be in accord with your opinion that - and this is the last sentence that is most significant:

"That there are anatomical lesions in this infant but my concern is that they do not adequately explain the clinical course."

I notice, Doctor, that you assigned a severity rating of 2 to this child, which was the lowest but for the child Pacsai.

A. That is correct.

Q. Now I think at one point you said that there was no obvious cause of death, and that you couldn't find a good anatomical or clinical reason for the child's death.

A. When was that?

Q. I think you said that either when you were examined by Mr. Lamek, or by Mr. Scott. The words I took down that there was no obvious cause of death as far as you could ascertain.

A. I believe that is true, yes.

Q. As I understand, Doctor, it certainly is clear that the congenital heart disease that this child had was not sufficient to account for death in this case.





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A. That is correct.

Q. Now, I would like to turn to the chart of that child, and in particular if I could turn you to the autopsy report, the final autopsy report which commences at page 30.

THE COMMISSIONER: I'm sorry, what page?

THE WITNESS: 30.

MR. OLAH: Q. And in particular I would like to turn - have you got the chart there?

A. Yes, thank you.

Q. Page 33, Doctor.

A. Oh, 33.

Q. The very last line of the second paragraph, or two lines:

"No organisms were cultured from the lungs at post mortem but the child was on intravenous antibiotics."

What significance do you attach to the fact that no organisms were cultured from the lungs?

A. Well, this child had pneumonia which I believe was fairly extensive but was apparently resolving and the pathologist felt that this was related to the perinatal period, in other words, from





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the time of birth. The reason they cultured the lung was to make sure that this was not a bacterial infection, and to try and determine which bacteria it was, if any. The cultures were negative, so this was not the - the presence of bacteria was not substantiated, but then the fact that the child was on antibiotics could have interfered with the culture because the tissues were bathed in antibiotics and the bacteria may have been killed.

Q. So there is no significance that can be attached to that finding?

A. No, I think it just makes it more difficult to culture when you have a child on antibiotics.

Q. The other thing I wanted to ask you about was, in the first paragraph, about half way down the report reads:





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"The biliary tree was patent by radiologic injection studies and severe bioplugging with extra medulary haematopoiesis could be seen microscopically."

Can you tell us what the significance of the biliary tree being patent, what significance is to be attached to that?

A. Okay. When you have a baby like this, jaundiced, one of the most important courses of the jaundice at this age would be what we call biliary atresia, atresia of the biliary ducts, that is, they are completely closed off, they don't permit the bile to flow through. This obstruction of the bile, of the flow of bile could be either outside the liver, because the biliary tree consists of the gall bladder, and then some big long ducted feeds that connects to the upper part of the bowel, which is called the duodenal. In addition, there are some branches that go into the liver itself. So the obstruction could be at any one of these levels. But here we know that this obstruction was not there, so it has been ruled out.

Q. The fact that the biliary tree







1  
2 was patent, would that indicate that the liver  
3 disease was not as advanced as one may have  
4 suspected?

5 A. No, I wouldn't say that. It  
6 simply would indicate that you can rule out certain  
7 types of biliary disease which could have produced  
8 jaundice. But all in all from the report, if you  
9 look at the entire pathology report of the liver  
10 disease it was such that in my opinion it could not have  
11 explained this child's clinical cause of the  
terminal deterioration and death.

12 Q. Now, Doctor, in the September  
13 13th meeting, your vote is cast as a "suspicious"  
14 death; but in view of the severity rating that  
15 you gave this child, being the same as Pacsai, is  
16 there any reason why this child is in the "suspicious"  
17 category instead of the "probable" category that  
Pacsai was in?

18 A. Do you know what page that is  
19 now?

20 Q. Yes. It is to be found at  
21 page 15 of the --

22 THE COMMISSIONER: This has something  
23 to do with the toxicology, wouldn't it?

24 THE WITNESS: That is correct.  
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MR. OLAH: That may be, sir.

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THE WITNESS: All cases of "probable murder" in the category of "probable murder" I believe, I am quite certain had toxicology, whereas this child did not.

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Q. And the end result would be, would it be fair to say that this child is on the high end of suspicion given the severity rating you have assigned to it and your view that there is no obvious cause of death?

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A. Yes. I would say from a clinical standpoint the child had a high rating, high index of suspicion. However, because of the absence of toxicology, she was placed in the suspicious category, which is one -- well, you know what it means, it means that we couldn't completely rule it out, we had to pursue it, but we had no toxicology. I shouldn't say completely rule it out, we couldn't rule out the possibility of digoxin toxicity, but we had no toxicology to confirm it.

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MR. OLAH: It is 4:30, Mr. Commissioner, would this be an appropriate time to break?

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THE COMMISSIONER: Well, it depends on how long you will be.





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MR. OLAH: I have no further questions.

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THE COMMISSIONER: You have no further questions?

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MR. OLAH: I have no further questions.

6

THE COMMISSIONER: Then it is a good time to stop with you, I would think anyway. What is your position, Mr. Tobias?

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MR. TOBIAS: Mr. Commissioner, I have a motion in the morning at 10:00 that I have arranged to have held down until 11. I checked with my friends and there is no objection to me starting at 10.

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THE COMMISSIONER: The trouble is I have got a thing ~~me~~ <sup>bob</sup> at 10:00, too, and I don't know how long they are going to take me, so we are not starting until 10:30.

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MR. TOBIAS: There may be a way around that as well, Mr. Commissioner.

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If I could start at 10:30 promptly I am confident I can be finished by 11:15, if you would allow me to do that at 10:30.

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THE COMMISSIONER: Do you have a motion at 10:30, could you not unhold yourself down and get on with it at 10 tomorrow morning?

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MR. TOBIAS: There is a very good possibility that I may be able to get it disposed of

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1  
2 between about 10 and 10:15.

3 THE COMMISSIONER: Yes, all right.

4 MR. TOBIAS: It depends how early  
5 I get to the court and how nice I am to the Master.

6 THE COMMISSIONER: Well, we have  
7 three others. How long -- what about -- Ms.  
8 Jackman, you will be half an hour?

9 MS. JACKMAN: I can't see that I should  
10 be much longer than half an hour.

11 THE COMMISSIONER: Do you see any  
12 chance of you being much shorter than that?

13 MS. JACKMAN: No, I don't.

14 THE COMMISSIONER: You can't see that  
15 either?

16 MS. JACKMAN: No.

17 THE COMMISSIONER: You are going to be  
18 exactly half an hour, perhaps one minute more?

19 MS. JACKMAN: Yes.

20 THE COMMISSIONER: What of you, Mr.  
21 Shanahan?

22 MR. SHANAHAN: Mr. Commissioner, I  
23 was going to ask, but since we are at the end of  
24 the day and I think we have gone past the hour, my  
25 concern, my difficulty is tomorrow morning.

THE COMMISSIONER: Yes, you have a







1  
2 permanent date with the Provincial Court every  
3 morning, well, it shows that business is good  
4 anyway, Mr. Shanahan.

5 MR. SHANAHAN: Obviously I would  
6 have to go out of order. I am just wondering  
7 if the worst came to the worst you might allow me  
8 the indulgence that you would either permit those  
9 people to re-examine but I tell you I think I will  
10 be about 15 to 20 minutes, so much ground has been  
11 covered by everybody that all I will be doing is just  
12 tying a few threads together.

13 THE COMMISSIONER: I don't anticipate  
14 a great deal of re-examination, I might be wrong.

15 MR. SHANAHAN: I'm sorry.

16 THE COMMISSIONER: I don't anticipate  
17 a great deal of re-examination, but I may be wrong.

18 MR. SHANAHAN: No, it may not give  
19 me too much time.

20 THE COMMISSIONER: Well, I don't know  
21 what to do, I would like to oblige and I suppose  
22 if the witness is willing we could go on with one  
23 more or the other of you. How long would you be,  
24 Mr. Tobias, if you were on?

25 MR. TOBIAS: I would assume one-half  
hour or 45 minutes.





1  
2 THE COMMISSIONER: That is too long  
3 for tonight. How long would you be tonight if we  
4 put you on now?

5 MR. SHANAHAN: I would be 20 to 25  
6 minutes, to half an hour.

7 Ms. Jackman and Mr. Labow told me  
8 he thinks he would be around an hour.

9 MR. LABOW: An hour to an hour and  
10 a half.

11 MR. SHANAHAN: I may well be. All  
12 right, tomorrow.

13 THE COMMISSIONER: Well, I think  
14 that is what we would do. What we might do is if  
15 you are not ready we might proceed with the motion  
16 after we have heard from Ms. Jackman and Mr. Labow  
17 tomorrow.

18 MR. SHANAHAN: And Mr. Tobias.

19 THE COMMISSIONER: He may not be  
20 here, either, he also has other clients.

21 MR. TOBIAS: Mr. Commissioner, I  
22 am not quite sure I can be here at 10:30, one way  
23 or the other, whether I finish my motion early or  
24 I have to have it stood down a little bit longer --

25 THE COMMISSIONER: Well, we are  
not starting before 10:30 tomorrow anyway, and I am





1  
2 not sure I will be here at 10:30, but I am going  
3 to try to be here at 10:30. So the three of them  
4 are solved and you are the only one we have to worry  
5 about.

6 MR. SHANAHAN: I think with that delay  
7 until 10:30 and the other things, I think I will be  
8 safe.

9 THE COMMISSIONER: All right.

10 So then we will rise until 10:30  
11 tomorrow morning.

12 ---Whereupon, at 4:35 p.m. the hearing adjourned  
13 until December 14th at 10:30.

14 \* \* \*









